

Chapter 4: Interpretation of results

Coping with the demands of everyday life would be exceedingly trying if one could arrive at solutions to problems only by actually performing possible options and suffering the consequences.

(Bandura, 1997)

4.1 Introduction

In the previous chapter the methodological strategies related to this research were discussed and defended. The outcomes of the analysis process are documented and are available in the appendices A-J.

This chapter aims to answer the following two research questions:

- What strategies do participants with diverse emotional intelligence profiles implement in order to master new educational technologies?
- What were the cognitive thought processes and emotions experienced by the participants while using diverse coping strategies?

The first part of the chapter presents a summary of the coping strategies used by the participants, while in the next section three themes related to coping on the part of the participants are presented. These three themes are:

- **Theme 1:** Participants use positive and no negative coping strategies, pp 130–153
- **Theme 2:** Participants use both positive and negative coping strategies, pp 154–168
- **Theme 3:** Participants use negative and no positive coping strategies, pp 169–179

This section is followed by a discussion of the EI scores of the participants. The chapter concludes with a presentation in three groupings of the EI scores in terms of the Emotional Coping Hierarchy according to Salovey *et al.* (1999). These three groupings are as follows:

- **Group 1**, participants 2, 3, 4, 6 and 8, pp 185–189
- **Group 2**, participants 5 and 9, pp 189–190
- **Group 3**, participants 1, 7 and 10, pp 191–194

Figure 4.1 presents an overview of chapter 4.

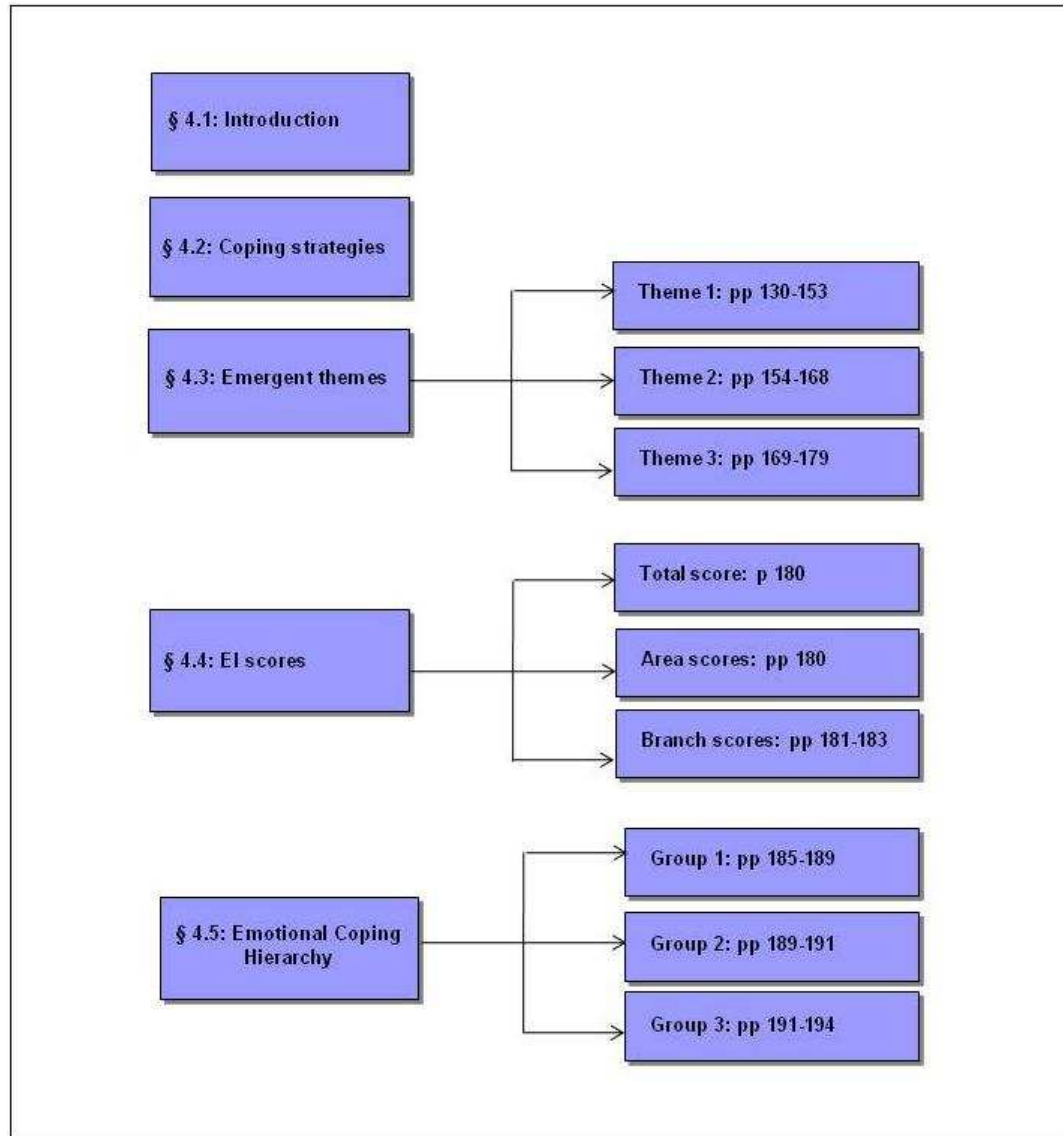


Figure 4.1 Overview of chapter 4

The next section deals with the coping strategies used by the participants.

4.2 Coping strategies used by participants

This section aims to answer the following sub-question:

What strategies do participants with diverse emotional intelligence profiles implement to master new educational technologies?

A summary of the diverse coping strategies used by each participant is available in appendices A–J. Table 4.1 summarises the coping strategies as used by all the participants.

Table 4.1 Summary of coping strategies of participants

Possible strategies			Strategies used by participants										
			1	2	3	4	5	6	7	8	9	10	
Active coping strategies	Problem-focused coping	Cognitive decision-making (CDM)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Direct problem solving (DPS)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		Seeking understanding (SU)		✓		✓				✓			
	Positive cognitive restructuring	Positivity (POS)		✓	✓	✓	✓	✓		✓			
		Control (CON)			✓		✓						
		Optimism (OPT)		✓	✓	✓		✓		✓	✓		
		Humour		✓						✓			
Distraction strategies	Distracting actions (DA)	✓											
	Physical release of emotions (PRE)												
Avoidance strategies	Avoidant actions (AVA)	✓				✓		✓		✓	✓	✓	
	Repression (REP)	✓											
	Wishful thinking (WISH)												
Support-seeking strategies	Support for actions (SUPA)	✓	✓	✓	✓	✓	✓		✓	✓			
	Support for feeling (SUPF)												

The table illustrates the following results:

Active coping strategies:

- All the participants used problem-focused coping strategies in the form of cognitive decision-making and direct problem solving.

- Participants 2, 4 and 8 used the problem-focused coping strategy of seeking understanding.
- In terms of positive cognitive restructuring the following may be observed:
 - Participants 2, 3, 4, 5, 6 and 8 made use of positivity in order to cope.
 - Participants 1, 7, 9 and 10 did not use positivity.
 - Control was used by participants 3 and 5.
 - Optimism was used by participants 2, 3, 4, 6, 8 and 9.
 - Participants 2 and 8 made use of humour as a coping strategy.

Distraction strategies:

- Participant 1 used distraction actions.

Avoidance strategies:

- Avoidance actions were used by participants 1, 5, 7, 9 and 10.
- Participant 1 made use of repression as a coping strategy.

Support-seeking strategies:

- Participants 7 and 10 did not mention the use of support-seeking strategies.

Note: The instructional designers gave support to all participants as part of the programme. During show-and-tell sessions peer support was highly evident. A limitation of the research is that it is biased towards verbal and narrative accounts, as less verbal participants did not blog as much as the more verbal participants.

Summary of the results from table 4.1:

- All participants used direct problem solving and cognitive decision-making.
- Participants 1, 7 and 10 display similar profiles in the sense that they all used avoidance strategies, but no positive cognitive reconstruction strategies. A limitation in this case is that participants 7 and 10 were nonverbal and made use of the blogger to a limited extent, in contrast with the rich and vocal data of participant 1.
- Participants 5 and 9 made use of positive cognitive reconstruction strategies, as well as avoidance strategies.
- Participants 2, 3, 4, 6 and 8 used similar strategies in the sense that they all used positive cognitive strategies, but no avoidance strategies. Only participants 2 and 8 made use of humour as a coping strategy.

4.3 Emergent themes

The previous section explicated the results emerging from the analysis of the coping strategies used by the participants. An analysis of the data revealed three distinct groupings among participants:

Theme 1: Participants using positive and no negative coping strategies

Theme 2: Participants using both positive and negative coping strategies

Theme 3: Participants using negative and no positive coping strategies

Table 4.2 presents the inclusion and exclusion criteria applicable to the different themes.

Table 4.2 Inclusion and exclusion criteria for the different themes

Theme	Inclusion criteria	Exclusion criteria
1	Use of positive coping strategies	No use of negative coping strategies
2	Use of both positive and negative coping strategies	Use of positive coping strategies only Use of negative coping strategies only
3	Use of negative coping strategies	No use of positive coping strategies

Figure 4.2 provides a representation of the themes associated with the grouping of participants.

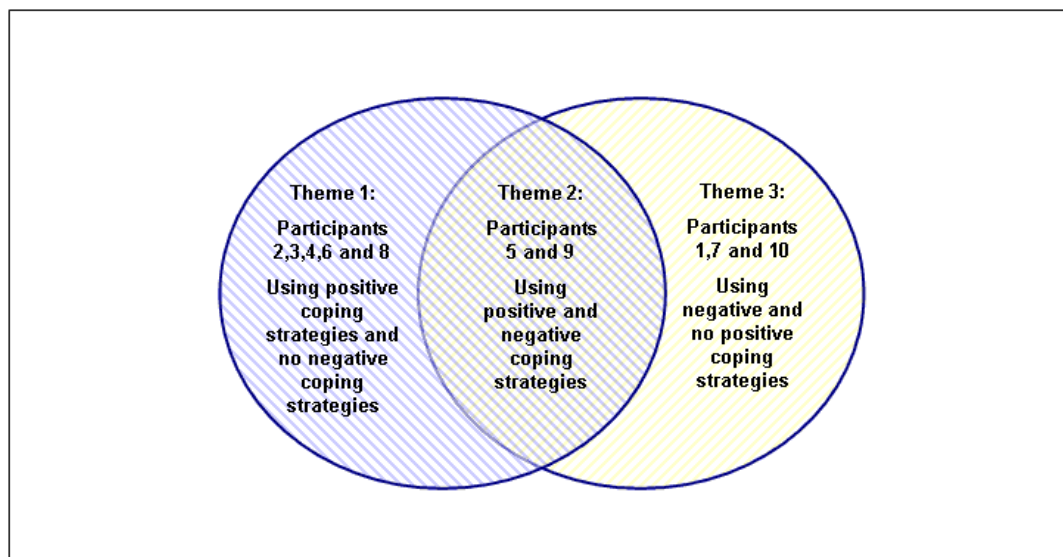


Figure 4.2 Themes associated with the grouping of participants

This section illustrates the emotions experienced by and the thought processes of the participants in each grouping, and provides an answer to the second sub-question:

What were the cognitive thought processes and emotions experienced by the participants while using diverse coping strategies?

In an attempt to tell the story using the actual voices of the participants, there are frequent quotations from the narratives of the participants. In other words exemplary quotes are used to illustrate observations.

4.3.1 Theme 1: Using positive and no negative coping strategies

Theme 1 exemplifies the reasoning, feelings and emotions on the part of this grouping of participants while they were coping with mastering new educational technologies. The grouping consists of participants 2, 3, 4, 6 and 8. The detailed sets of data of their narratives are available for perusal in appendices B, C, D, F and H. Figure 4.2 summarises the sub-themes and categories within Theme 1.

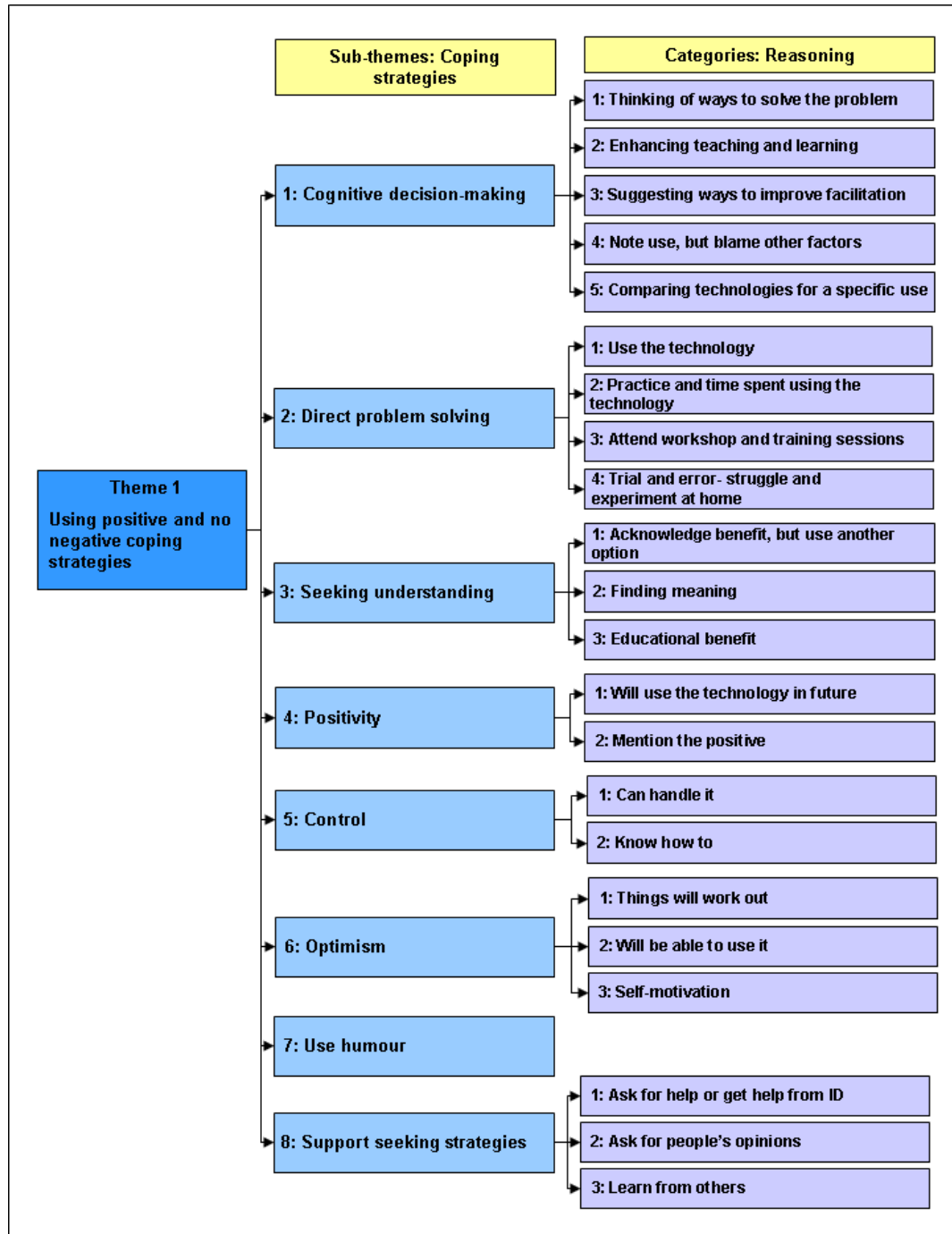


Figure 4.3 Summary of sub-themes and categories within theme 1

Within theme 1, the group of participants made use of a wide range of coping strategies: cognitive decision-making, direct problem solving, seeking understanding, positivity, control, optimism, use of humour and support-seeking strategies. An essential factor for inclusion in this group was the absence of avoidance strategies. In this group of participants the use of problem-focused coping strategies centred on

feelings of self-efficacy, although some of the participants made use of these coping strategies to voice suggestions on ways to improve the programme. The next section presents the reasoning of participants around the use of cognitive decision-making as a coping strategy.

4.3.1.1 Sub-theme 1: Cognitive decision-making

With the use of cognitive decision-making as a coping strategy, participants illustrated their reasoning as regards ways to solve a problem when confronted with the mastering of a new technology.

4.3.1.1.1 Category 1: Thinking of alternative ways to solve the problem

One of the ways of using cognitive decision-making as a coping strategy was formulating an alternate way to solve the problem should the participants encounter difficulties with a specific technology. Table 4.3 presents examples of the actual words used by the participants about alternative ways of solving a problem.

Table 4.3 Thinking of alternative ways to solve a problem

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Thinking of alternative ways to solve a problem	P2: <i>I did not have problems in mastering FrontPage, but many problems with the program (software) itself, and therefore did not incorporate it in my course (Used Powerpoint instead) I will definitely use it in future, because I think it is a powerful application! (Table B.2#1).</i>
			P4: <i>Blogger: It seems that I am very unfortunate in trying to block [sic]. The past three times I was thrown off the network time and again – I now rather try to write my blog in Word and copy and paste it (Table D.2 #1).</i>

Participants 2 and 4 were not prepared to be defeated by the problem and showed evidence of creative thinking. Of particular significance is the positive way in which the participants addressed the problem. Participant 2 experienced problems with the software but, as an alternative to blaming the software itself, the participant made use of another option to complete the learning materials for the course, while at the same time remaining positive and optimistic about the use of FrontPage in the future. In a similar way, because of a very slow internet connection, participant 4 experienced problems uploading reflections to Blogger. However, participant 4 remained positive,

did the reflection in Word and copied and pasted it in the reflective journal on the internet. Could there be a link with emotional intelligence?

4.3.1.1.2 Category 2: Enhancing teaching and learning

The linking of the use of the technology to their own field as an enhancement of the teaching and learning process was another way participants coped by using cognitive decision-making. Table 4.4 presents quotes from participants relating to cognitive decision-making in terms of enhancing teaching and learning.

Table 4.4 Enhancing teaching and learning

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Enhancing teaching and learning	P2: <i>Camtasia: What an excellent little application for use in ...! I found it easy to master and have used it for a few movie clips – will definitely use it for many more typical student problems (Table B.2#14).</i>
			P2: <i>The possibilities of WebCT as test organizer is amazing! I can see many self-tests, pre-tests, surveys etc. being done here for my course as well. I still cannot see that I will use it to replace the two main semester tests because of its limitations, but maybe I just do not know enough about this tool yet (Table B.2#17).</i>
			P3: <i>I enjoyed the presentations on ADDIE's Analysis component, as well as the hands-on session on E-Portfolios. It helped me a lot to focus my plans for ...s telematic programme, as I realised that I have been thinking too wide and too vaguely about it. In the coming days and weeks I want to narrow my plans a lot more and that is where the Needs Analysis Assignment will help a lot. Each time that we look at a new component of WebCT I am more impressed and excited about its possibilities for my telematic an-programme (Table C.2.#12).</i>
			P3: <i>WebCT: The various sessions throughout the programme enabled me to gradually gain a grip on all the relevant parts and to use it in my programme development. The big emphasis on this technology was a strong point as it formed the backbone of my programme development and presentation. (Table C.2.#5).</i>
			P3: <i>WebCT: On-line courses have so much more to offer my students in terms of resources, assessments and support than I was ever aware of. (Table C.2.#7).</i>
			P3: <i>WebCT: Excited about professional growth. Excited about personal growth. Excited to take what I learn back to my department and faculty to help, support and motivate them to also take up the telematic challenge. (Table C.2.#8).</i>

Participant 2 showed evidence of meta-cognitive thinking by linking the application of Camtasia to the solving of typical student problems in the specific field of study. The cognitive thinking process on the part of participant 2 is illustrated by musings on the possibilities of WebCT as a test organiser. Of significance is the positive way in which the limitations of WebCT are mentioned and reasoned about. Participant 3 reflects in a very positive way on the benefits gained from the presentations, as well as the exciting possibilities in terms of the development of learning materials. Participant 3 shares ambiguous feelings of simultaneous excitement and fear, but at the same time views the learning curve positively as a challenge for personal and professional growth. Participant 3 reflects on being empowered to support and motivate department and faculty members in turn.

What is significant in the reasoning of these participants is the positive way of thinking about ways in which the use of specific technologies may benefit the development of teaching and learning materials for their courses and the ability to express their feelings and share emotions.

4.3.1.1.3 Category 3: Suggesting ways to improve facilitation of the programme

In the process of mastering the different technologies, participants identified factors that could improve the facilitation. The suggestions made on ways to improve the facilitation process when introducing new educational technologies signified cognitive thinking on ways to solve problems. Table 4.5 presents quotes from participants relating to suggestions on ways to improve the facilitation of new technologies.

Table 4.5 Suggesting ways to improve facilitation of the programme

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Suggesting ways to improve facilitation	<i>P2: Very interesting information –it helps to understand the important facts to remember when creating not only video clips, but any type of graphics. It may be a good idea to have this session again later during the course, after we have worked with graphics more, and more people will understand the basic ideas behind it (Table B.2.#4).</i>

Table 4.5 Suggesting ways to improve facilitation (cont.)

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Suggesting ways to improve facilitation	P6: <i>I appreciateds session to find out how we experienced the e-moderating, and some concerns were expressed. I think we are just under a lot of pressure now. A suggestion: maybe next year's group should have two days a week for the first few weeks and then, when they have the new technologies mastered, only once a week. We had a rather slow start and now we are speeding out of control! (Table F.2.#1)</i>
			P6: <i>The WebCT re-cap was necessary as I realised that I forgot many important things! I still feel that most of the time I am behind and I am now sure that I am a very slow learner. Some people just get the whole idea with half a word! I am not one of those and will just have to work harder. Even though the course interface is very simple at this time, it is great to know that I did it. I would like some more sessions on graphics and scanning just to be more sure of myself (Table F.2.#7).</i>
			P8: <i>The blogging is starting to feel like a useless exercise, which, of course, it is not. Maybe ... should give regular feedback on the group's experience. I feel as if our comments are being ignored because we don't get feedback (Table H.2.#5).</i>

Participant 2 commented positively on the importance and relevance of the information regarding video clips, but was of the opinion that this information should be presented later in the course when it would be more relevant – a valid argument. It is worth noting how, by pointing out how advantageous it is to have completed the course interface of the learning programme in WebCT, participant 6 deals in a positive way with negative feelings. Although the participant feels uncertain, there is positive reasoning that more sessions are needed.

Participant 8 voiced the need for feedback on the reflections of the partners in Blogger. Even though being discouraged by the lack of feedback. This participant continued blogging and reflecting, although the participant was discouraged by the lack of feedback.

An observation concerning the positive manner in which participants convey their thoughts about ways to improve the programme demonstrates the positive way this grouping, in contrast to the negative way of participants in the other groups, deals with these issues. Could this be evidence of a link with emotional intelligence?

4.3.1.1.4 Category 4: Note use, but blame other things

In certain instances the usefulness of a technology was noted, but something else was blamed for the inability to cope adequately with the technology. Table 4.6 presents quotes from the participants pertaining to the usefulness of a technology and to factors interfering with the mastering of the technology.

Table 4.6 Note use, but blame other things

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Note use, but blame other things	<p>P4: Perception: <i>Also the perception program seems to be a very powerful system, but it is unfortunate that we did not have enough time to practise in class due to the test that needed to be written in the IC (Table D.2.#2).</i></p> <p>P2: <i>I still have reservations about Perception – it seems to be a bit complicated, again only for shorter question types – I see there is an essay option as well and will look into it, to see how it can help me to mark programming.(Table B.2.#19).</i></p>

Participant 4 commented on Perception as a powerful program, but stated it was unfortunate that there was not sufficient time to practise. Participant 2 reflected that Perception was a complicated program to use, but noted that the essay option might be of help with the marking of programming. Even though the participants experienced difficulties mastering the technology, the overall mood evident in their reflections was positive.

4.3.1.1.5 Category 5: Comparing technologies for a specific use

In this instance, different technologies were compared in terms of usability, thus demonstrating higher order cognitive skills. Table 4.7 presents quotes relating to the comparison of different technologies for a specific application.

Table 4.7 Comparing technologies for a specific use

Theme	Sub-theme	Category	Quotation
1	Cognitive decision-making	Comparing technologies for a specific use	<p>P8: <i>The producing of a professional video makes Camtasia redundant. I believe that very few of the Partners, for understandable reasons, can appreciate the power of an effective training video. This technology, when done professionally, can encapsulate most of the other technologies. The only drawback is the expense involved in producing the video (Table H.2.#14).</i></p> <p>P8: <i>With regards to [Perception]]: This is the 3rd programme that may be used to design assessments. In a situation where I am experiencing information overload I would prefer the designers to choose the best programme for us and then stick to that one only. Why do we need to know how to drive a car, bicycle and tractor when you need to go from point a to b? (Table H.2.#6).</i></p>

Participant 8 voiced a valid argument about the use of three different software programs for e-testing, when one program would have been sufficient.

The extensive use of cognitive decision-making as a coping strategy is evident in the narratives of the participants. The reasoning ranged from thinking of alternate ways to solve problems creatively when mastering a technology to expressing ideas on ways in which the instructional designers could enhance the facilitation process. The next section deals with the reasoning of the participants from the grouping in Theme 1 on *direct problem solving*.

4.3.1.2 Sub-theme 2: Direct problem solving

It would appear that participants made use of direct problem solving in times of perceived self-efficacy, when they felt confident about their ability to use and apply the particular technology.

4.3.1.2.1 Category 1: Use the technology

When participants experienced the technology as user friendly, they voiced their delight at using it. Table 4.8 presents quotes on the usefulness of specific technologies.

Table 4.8 Use the technology

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Use the technology	P2: <i>Respondus was easy to master and to use. I have used it for all my web tests with success (Table B.3.#6).</i>
			P2: <i>Respondus has got my vote –I created a nice activity, making use of Respondus for the self tests, as well as a short formal assessment (Table B.3.#9).</i>
			P8: <i>Respondus is user friendly and most of the Partners reacted positively to its capabilities. It was enlightening that multiple-choice, which may be regarded by some as a “monkey-puzzle” with little educational value, turned out to be quite the opposite. I believe that this programme has the ability to accurately test the students’ knowledge.(Table H.9.#7)</i>
			P2: <i>Yahoo Messenger: An excellent way to keep in contact with people! Mastering easy! (Table B.10.#4).</i>

From their narratives it would appear that, if the participants perceived a particular technology as user friendly, they enjoyed it and used it extensively. Participants often mentioned Yahoo and Respondus in this connection.

Table 4.8 Use the technology (cont.)

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Use the technology	P6: <i>Blogger: I had no idea that something like this even existed and had to be very disciplined to keep it updated. This was the first thing I did after getting home from our work sessions as the information was still fresh in my mind. It was nice to be able to record some of the joys as well as the frustrations and sometimes the words just poured out of me. Other times I was more reserved with not that much to say (Table F.3.#13).</i>
			P8: <i>The Blogger Programme is more useful to those who peruse its content than to those who create the content. Not getting feedback regarding all the effort by so many people that is put into the Blogging creates a feeling that the input has no outcome. But this is obviously only psychological. (Table H.3.#2).</i>

Table 4.8 Use the technology (cont.)

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Use the technology	<p>P2: WebCT: <i>The mastering process was handled very good by ... (&kie) and I enjoyed working (and still enjoy working) in WebCT. Personally I liked the pace, but I can understand that less computer literate people may have problems coping.</i></p> <p><i>I am trying to implement as many of WebCT's elements as possible in my course - almost all aspects are working fairly well at this stage – maybe it is a bit early in the semester to truly comment on this (Table B.3.#7).</i></p>

Participant 6 commented on the use of Blogger as a reflection journal, and recorded the frustrations and joys of the program. Participant 8 reflected on the apparent use of blogging, but noted the adverse effect of the lack of feedback. In comments on the facilitation of WebCT, participant 2 mentioned the very important fact that less computer-literate participants may have problems mastering WebCT due to too rapid a pace. This could, other than emotional intelligence, be an important factor influencing coping with the mastering of new technologies.

The observation that once a technology is perceived to be user friendly no problems are experienced in mastering the technology gives rise to a question regarding the impact of this on the facilitation of a technology. What could be done to ensure that participants experience a technology as user friendly?

4.3.1.2.2 Category 2: Practice and time spent using the technology

As with the previous category, the participants had no problem practising and spending extra time in the case of a technology which was perceived as user friendly. Table 4.9 presents the quotes relating to practising and spending time on the use of a technology.

Table 4.9 Practice and time spent using the technology

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Practice and time spent using the technology	P4: <i>Some was easier than others. I have spent more time on practising those that I found harder and also sought help from my ID and other partners if necessary (Table D.3.#2).</i>
			P3: <i>Camtasia: The training session and applications by other Partners were good fun. The application possibilities are clear, but not really in my field. Strategies to master the technology: Play around a bit with it at home (Table C.3.#3).</i>

Although participant 3 was of the opinion that Camtasia did not have application possibilities in a specific field of study, the participant still mastered it by practising at home. Participant 4 mentions spending more time and obtaining help in order to master the more difficult technologies, thus displaying evidence of resilience.

4.3.1.2.3 Category 3: Attend workshops and training sessions

As attendance at the training sessions was compulsory, not all the participants commented on whether the training sessions were beneficial or not. Table 4.10 presents a quote relating to the training sessions.

Table 4.10 Attend workshops and training sessions

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Attend workshops and training sessions	P3: <i>FrontPage: ... training session was good. The continuous hands-on use of it throughout the Partners programme (especially the Show-and-Tell sessions) helped a great deal to become more familiar with all its applications (Table C.3.#5).</i>

Participant 3, in noting the preference for hands-on sessions, mentions the positive outcome of training sessions and workshops.

4.3.1.2.4 Category 4: Trial and error – struggle and experiment at home

These quotes tell the story of participants working at home – endeavouring to master the technologies. Quotes pertaining to the efforts of participants in mastering new technologies are included in table 4.11.

Table 4.11 Trial and error – struggle and experiment at home

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Trial and error – struggle at home	P8: <i>My own blood, sweat, and tears. Struggling the way all computer illiterates struggle when first learning a program. (Table H.3.#1).</i>
			P6: <i>Front page: I enjoyed this program but would have liked more training and time to work with this program before developing my online course as I made several mistakes which I felt could have been prevented by more training. I liked the templates and creative features and had to learn very quickly but find it very useful and would like to use it extensively in future (Table F.3.#8).</i>
			P6: <i>Corel Draw: I was overwhelmed when first experiencing the features of Corel Draw. I did not feel we had enough training and was very unsure when I had to use this on my one. Once again I searched for a manual to explain the different features and had many trials before mastering some of the features. I feel there is a lot I still need to learn which can make life much easier and my courses more interesting (F.3.#11).</i>

Again, what emerge here are suggestions on ways to improve facilitation and needs as seen from the point of view of participants. What is evident from the narratives is a determination to cope, despite feeling unsure and overwhelmed. The question arises again as to whether there is a link with emotional intelligence.

4.3.1.3 Sub-theme 3: Seeking understanding

As regards the coping strategy of *seeking understanding*, participants engaged in efforts to find meaning in the situation or attempted to gain a better understanding of the situation.

4.3.1.3.1 Category 1: Acknowledge benefit, but use another option

Table 4.12 presents a quote on the reasoning that a technology may be beneficial, but that other options could be more relevant.

Table 4.12 Acknowledge benefit, but use another option

Theme	Sub-theme	Category	Quotation
3	Seeking understanding	Acknowledge benefit, but use another option	P2: <i>I like the idea of blogging and did not have problems mastering it. The Blogger website, however, I did not like. I do not think to implement it somewhere in future - will use the survey-tool in WebCT for this purpose rather (Table B.4.#2).</i>

Participant 2 alluded to the benefits of the technology, but mentioned the problems experienced accessing the website, and expressed the possibility of using the technology in another way.

4.3.1.3.2 Category 2: Finding meaning

Table 4.13 contains quotes relating to finding meaning in the context of seeking understanding.

Table 4.13 Finding meaning

Theme	Sub-theme	Category	Quotation
3	Seeking understanding	Finding meaning	P4: <i>The group discussion on needs analysis was useful and insightful, as well as the presentation on the ADDIE (Daisy) model. Throughout the day I enjoyed the activities and group work, learnt a lot and had lots of fun. It was great to have material presented in the correct way! Today also made me realise once again how important it is to bring fun into learning and I will keep that in mind with the designing of my course (Table D.4.#1).</i>
			P2: <i>The way in which we did the ADDIE model introduction made a lot of sense, because we this is something that you can do via internet searches and it also gave us lots of practice in many other things (teamwork/ppt/present etc.) (Table B.4.#5).</i>

Participant 4 commented on the presentation of the lecture, and found meaning by linking it to the design and development of learning materials, and by fun having been

brought into the activity of learning. Participant 2 remarked on the incidental learning of skills while being introduced to another topic.

4.3.1.3.3 Category 3: Educational benefits

Quotes relating to seeking an understanding of the use of technologies pertaining to educational benefits are presented in table 4.14.

Table 4.14 Educational benefits

Theme	Sub-theme	Category	Quotation
3	Seeking understanding	Educational benefit	P8: <i>Respondus is user friendly and most of the Partners reacted positively towards its capabilities. It was enlightening that multiple-choice, which may be regarded by some as a “monkey-puzzle” with little educational value, turned out to be quite the opposite. I believe that this programme has the ability to accurately test the students’ knowledge (Table H.4.#10).</i>
			P8: <i>WebCT: WebCT is the heart of the e-learning system. What started off as a frightening perception regarding this formidable learning programme ended up being a very positive experience. This was due to the realisation that, for a programme to be so effective, it has to have many dimensions, functions, and possibilities. I believe that those institutions who do not buy-in to WebCT or a similar program will, in the future educational environment, be left behind (Table H.4.#7).</i>
			P2: <i>Assessment... I am not good at short questions at all! But, after playing with Respondus for a while, I can see a major advantage of its use for shorter assessments, as well as self-assessments, and I will try to include it in the planned activities for the course. It is still a lot of work to transfer existing questions to it, but I am sure that shortcuts will be developed soon! (Table B.4.#13).</i>

Participant 8 showed insight with reasoning into the functions and possibilities of a learning management system such as WebCT, as well as commenting on the educational value of the software program Respondus. Participant 2 commented on the advantages of using shorter assessments and self-assessments as part of the activities in the course material being developed.

Three participants only used this particular coping strategy, namely, reasoning about the benefits of particular technologies.

The next four sub-themes deal with the use of positive cognitive restructuring coping strategies such as positivity, control, optimism and the use of humour.

4.3.1.4 Sub-theme 4: Positivity

Participants made use of positivity as a coping strategy in an effort to view the situation in a positive light, moving from negative feelings to positive thinking.

4.3.1.4.1 Category 1: Will use the technology in future

Table 4.15 presents quotes regarding the future use of different technologies.

Table 4.15 Will use the technology in future

Theme	Sub-theme	Category	Quotation
4	Positivity	Will use the technology in future	P2: <i>The way in which we did the ADDIE model introduction made a lot of sense, because this is something that you can do via internet searches and it also gave us lots of practice in many other things (teamwork/ppt/present etc.) (Table B.5.#2).</i>
			P2: <i>Camtasia is a really cool tool – Will definitely use it or something similar in future and try to sell it to our faculty!!! (Table B.5.#3).</i>
			P8: <i>I am impressed by the website (Prenhall) because they have my entire prescribed book ... on offer (Table H.5.#1).</i>
			P6: <i>Video: This was also really exciting. At first I was apprehensive to learn about all the terminology as I did not understand the technical mumbo jumbo, but was relieved to hear that I did not have to know about it and that other people would take care of all of that! It was a challenge to write the script for the video and I had to ask several people's opinions as I was very unsure of myself, but received valuable feedback which helped me to improve the script. I felt proud to have my script accepted and would like to use it in future (Table F.4.#1).</i>

Participant 2 expressed enjoyment of the programme and commented positively on the future use of skills and technologies, while participant 8 expressed delight both positively and emphatically with the online data available for use in the development of learning material. Although initially apprehensive, participant 6 persevered and mastered the script writing. Participant 6 expressed positive feelings of empowerment about future use of the technology.

Table 4.15 Will use the technology in future (cont.)

Theme	Sub-theme	Category	Quotation
4	Positivity	Will use it in future	P6: <i>I really enjoyed the hot potatoes as I saw this in another online course and wondered how it was done. I am definitely going to use it. Wimba was also nice but I got frustrated with the slow computers –we are very blessed with our ADSL lines!</i> (Table F.4.#10).

Participant 6 had seen the use of Hot Potatoes in another course and commented positively on using it in the future. Participant 6 also enjoyed the session with Wimba, although noting frustration with the slow computers, the participant nevertheless focused on the positive aspect of having an ADSL line at home.

4.3.1.4.2 Category 2: Mention the positive

Some of the participants focused on mentioning the positive aspects during the course of the programme, although they did experience negative emotions. Table 4.16 contains quotes regarding positive aspects mentioned by participants.

Table 4.16 Mention the positive

Theme	Sub-theme	Category	Quotation
4	Positivity	Mention the positive	P2: <i>It was a fun exercise to introduce Corel's many graphic options. I know, however, that this is a massive program, with lots and lots of nice things that one can do and therefore it will take more than these 6 months for us to really be able to use it to its fullest potential. Maybe we can have little things to do with it every now and then, each time challenging us to discover something else about the program?</i> (Table B.5.#5).
			P6: <i>I enjoyed the group activities and sharing our thoughts about the needs analysis. We have a lot of homework, but I am excited about it as it will be fun doing the activities while learning at the same time</i> (Table F.4.#7).

Participant 2 mentioned how enjoyable the introduction to the functionalities of CorelDraw had been, but was of the opinion that the time had been too limited to allow the participants to use the software to its fullest potential. Despite the amount of homework that needed to be done participant 6 voiced excitement about learning and sharing ideas.

4.3.1.5 Sub-theme 5: Control

The use of control as a coping strategy empowered the participant to be positive about handling or dealing with the problem at hand.

4.3.1.5.1 Category 1: Can handle it

Table 4.17 presents a quote pertaining to being able to cope successfully with the programme.

Table 4.17 Can handle it

Theme	Sub-theme	Category	Quotation
5	Control	Can handle it	P3: <i>On a personal note I've made a conscious decision to work hard towards the Telematic ... and ... for all the courses I'm involved in. It is going to take much more than just the next year or so, but I'm motivated to eventually transform all my Dept's undergraduate ... and ... into a Telematic programme. There's so much to do (and want to do), and so little time!!! (Table C.4.#1)</i>

Participant 3 reflects on a conscious decision to make the most of the time available to transform existing courses to online courses. This participant demonstrated resilience and the will to master the necessary technologies.

4.3.1.5.2 Category 2: Know how to

Table 4.18 presents the quote relating to knowing how to use the technology.

Table 4.18 Know how to

Theme	Sub-theme	Category	Quotation
5	Control	Know how to	P3: <i>I've enjoyed using Blogger to reflect on my experiences during the Partners programme. This is probably as a result of being familiar with keeping personal fieldnotes during qualitative research projects (Table C.4.#2)</i>

Participant 3 reflected on past experiences and reasoned that the past experience of keeping field notes enhanced the enjoyment of using Blogger to reflect on experiences.

4.3.1.6 Sub-theme 6: Optimism

Participants used optimism as a coping strategy. This involved thinking about the situation in a positive manner, and expressing the belief that matters would improve.

4.3.1.6.1 Category 1: Things will work out

Table 4.19 presents quotes relating to expressions of optimism that all would be well in the end.

Table 4.19 Things will work out

Theme	Sub-theme	Category	Quotation
6	Optimism	Things will work out	<p>P3: <i>I am excited about the time that lies ahead. Excited, and scared, to develop a telematic programme that will meet expectations. Excited about professional growth. Excited about personal growth. Excited to take what I learn back to my Dept and Faculty to help, support and motivate them to also take up the telematic challenge. But, I'm also a bit scared. Scared that others might have such high expectations of me that I will not be able to meet. Scared that I will not meet my own high standards. Scared that I might get alienated from my Dept.</i></p> <p><i>I want to keep going forward with the following motto: "Never give up" (Table C.5.#1).</i></p>
			<p>P8: <i>The most obvious impact of implementing the P@W project is going to be the need to expand the technology at all faculties at TUT in order to implement telematic programmes. A second need that will arise is the need to expand facilities at Telematic Education otherwise they will not be able to cope with the need to develop programmes. The P@W will, in future, still prove to be the most significant teaching and development strategy that this institution has embarked on (Table H.6.#1).</i></p>
			<p>P2: <i>The blueprint seems to be lots of work, as I expected from the discussions on the design phase. It helps to talk to various people about what you want to do, and I am sure that the next workshops will also help us in this process (Table B.6.#2).</i></p>

By voicing excitement about the possible positive outcomes of the programme participant 3 moved from the negative emotion of fear to the positive and focused on endeavour and not giving up. Participant 8 argued about the impact of the

Partners@Work programme, and optimistically expressed belief in the importance of this programme as a teaching and development strategy. Participant 2 mentioned that the blueprint in the design phase had seemed to entail a considerable amount of work, but nevertheless expressed the optimistic belief that talking to various people and attending the next workshop would be helpful.

4.3.1.6.2 Category 2: Will be able to use the technology

Although some of the participants this group did not complete the video nor did they have practical experience of some of the technologies, they did comment positively on being able to use the technologies. Table 4.20 summarises quotes relating to a belief in being able to apply the specific technology.

Table 4.20 Will be able to use the technology

Theme	Sub-theme	Category	Quotation
6	Optimism	Will be able to use the technology	P2: <i>Video: I have completed the video thing yet... Mainly because of time –I have gone through the planning and preparation phases and found it interesting. Hope to complete it later in this semester, because there is a definite application possibility of this in the subject developed for Partners@Work (Table B.6.#8).</i>

Participant 2 expressed optimism about completing the video later in the semester, and mentioned the possibility of applying the technology in the course developed during the programme.

Table 4.20 Will be able to use the technology (cont.)

Theme	Sub-theme	Category	Quotation
6	Optimism	Will be able to use the technology	P3: <i>Video Conferencing: I don't have any practical experience in applying it, but have a good idea of the preparations and requirements for actual sessions (Table C.5.#2).</i>
			P3: <i>... 's continued training in specific WebCT tools was very helpful. For the first time I've actually not mind her going at quite a fast pace through all the different sections. Somehow it felt as if can do to make one feel comfortable and at ease with a specific program!!I could keep up without much difficulty. Just a month or so ago, it would have left me completely lost. Just shows you what a bit of first-hand experience (Table C.5.#8).</i>

Although participant 3 had not had practical experience of video conferencing, the participant nevertheless appeared confident knowing about the preparations and requirements needed for a session. Participant 3 touched on a very important factor – facilitating new educational technologies – the importance of repetition in the teaching of new skills. Participant 4 shared feelings of initial uncertainty and apprehension about the new technologies, but expressed a belief in the personal benefit of acquiring new skills.

4.3.1.6.3 Category 3: Self-motivation

The positive way in which participant 3 used self-motivation is encapsulated in the quotes in table 4.21.

Table 4.21 Self-motivation

Theme	Sub-theme	Category	Quotation
6	Optimism	Self-motivation	P3: <i>I've heard the following saying some time ago that meant a lot to me, and hopefully to everyone reading this blog: "Excellence and beauty comes from passionately motivated people". So, that's what I'm going to strive for in the coming days and weeks (Table C.5.#5).</i>
			P3: <i>I was so impressed by the Show-and-Tell session. The progress and quality of ..., ... and ... course development are just astounding. If I just think back on what things look like a month or so ago, it is amazing what the Partners have learned and become skilled in. They once again motivated myself to work harder, smarter and with gusto (Table C.5.#6).</i>
6	Optimism	Self-motivation	P3: <i>During this week I've once again realised the privilege of being a Partner, but also the responsibility that comes with it. Even though my head often spins after a contact session due to all the new stuff I've learned, it remains exciting and challenging to be empowered on such a wide technology-front. There is no way that I will ever be the same lecturer as before the Partners-programme!!! (Table C.5.#7).</i>

Participant 3 used optimism and self-motivation as a coping strategy, and focused on the quest for excellence. It is important to note the way in which participant 3 assumed responsibility for coping with the new technologies, and concentrated on the positive outcomes.

The use of optimism as a coping strategy means that participants focus on possible beneficial outcomes, and reframe the situation in a positive way.

4.3.1.7 Sub-theme 7: Use humour

Two of the participants only made use of humour as a coping strategy in an effort to transform negative feelings into positive feelings. Table 4.22 captures the quotes which illustrate the use of humour as a coping strategy.

Table 4.22 Use humour

Theme	Sub-theme	Category	Quotation
7	Use humour	Use humour	P8: <i>My feelings can only be described as “manic-calm”. At times I felt overwhelmed by the constant flow of homework while I was trying to learn the “language” of the computer programs. It was like trying to direct Chinese workers during the process of building a nuclear plant, while still learning to speak Chinese. However, once the program was mastered, it became very enjoyable to be part of the group all involved in instructional design (Table H.7.#2).</i>

Participant 8 made use of humour, and used a metaphor of teaching Chinese workers to perform a task while still being at the stage of learning to speak Chinese. Participant 8 used this strategy to cope with the initial feelings of being overwhelmed.

Table 4.22 Use humour (cont.)

Theme	Sub-theme	Category	Quotation
7	Use humour	Use humour	P8: <i>Our previous lecture made me feel sorry for the way I sometimes run over new students. We started the lecture on e-portfolios with the term hyperlink. I was hoping that I would, during the lecture, come to understand the term. Alas, at the end of the lecture I had not progressed beyond the term hyperlink. I today still think that it has something to do with a "BAIE GROOT APTEEK" (Table H.7.#6).</i>
			P2: <i>One day (when I am a grown-up) maybe I will also be able to create a nice video for my students... (Table B.7.#1).</i>
			P2: <i>I think some of us could have done with more time on both, but am sure that we will all live!! (Table B.7.#1).</i>

Participant 2 expressed sympathy with the way in which new students feel bombarded with new terms but are not given explanations for these terms. Tongue-in-cheek the participant mentioned the misunderstanding of the word ‘hyperlink’ – a very big pharmacy (Link being the name of a chain of pharmacies). Participant 2 had not yet completed a video and humorously states that, one day, as a grown up, he will create the video. These quotes illustrate the use of humour – looking at the lighter side of the situation – and hence not falling into the trap of negativity.

4.3.1.8 Sub-theme 8: Support seeking strategies

The coping strategy of support seeking used by the participants entailed *support for actions*. The use of this coping strategy occasions the use of other people as a sounding board or as a resource in seeking solutions for a specific problem.

4.3.1.8.1 Category 1: Ask for help or get help from instructional designer

When encountering problems with mastering a technology, participants relied on the help of the instructional designers or other participants in the Partners@Work programme. Table 4.23 presents quotes relating to support from the instructional designers.

Table 4.23 Ask for help or get help from instructional designer

Theme	Sub-theme	Category	Quotation
8	Support seeking strategies	Ask for help or get help from instructional designer	P4: ...also sought help from my ID and other partners if necessary (Table D.7.#3)
			P6: I realised this week that I have to see my instructional designer at least once a week as their is a lot I need help with! (Table F.56.#2).
			P8: My instructional designer helped, Partners helped and I even employed a personal friend to help me understand the programs, especially FrontPage (Table H.8.#1)

Participants 4, 6 and 7 mentioned obtaining help from other partners and the instructional designers in order to master new technologies.

4.3.1.8.2 Category 2: Ask for people’s opinions

Table 4.24 presents quotes pertaining to the need to receive feedback.

Table 4.24 Ask for people’s opinions

Theme	Subtheme	Category	Quotation
8	Support seeking strategies	Ask for people’s opinions	P2: <i>I also had to do many feedbacks and discussions at our faculty regarding Partners and everything we did. I am mostly satisfied with the subject material, but have a huge problem in the sence that I have not really received any true criticism, feedback or whatever you would like to call it. Even yesterday's feedback session did not help me much in this regard... I think that everybody is at this stage too involved in their own work to really sit down and give time and concentration for somebody else's work (Table B.8.#1)</i>
			P6: <i>Video: This was also really exciting. At first I was apprehensive to learn about all the terminology as I did not understand the technical mumbo jumbo, but was relieved to hear that I did not have to know about it and that other people would take care of all of that! It was a challenge to write the script for the video and I had to ask several people’s opinions as I was very unsure of myself, but received valuable feedback which helped me to improve the script. I felt proud to have my script accepted and would like to use it in future (Table F.6.#1).</i>

Participant 2 expressed the need to obtain honest criticism about the course material developed in order to be able to effect the necessary improvements. Valuable feedback as regards the scriptwriting for the video enabled the participant to improve the script, and thus empowered the participant.

4.3.1.8.3 Category 3: Learn from others

A valuable source of information for participants was their co-partners in the Partners@Work programme – people with creative ideas and a broad knowledge, and willing to share and help. Table 4.25 pertains to quotes about learning from others.

Table 4.25 Learn from others

Theme	Sub-theme	Category	Quotation
8	Support seeking strategies	Ask for people’s opinions	P2: <i>...gave me a nice idea or two that I will still include on WebCT (Table B.8.#4).</i>
			P3: <i>I've enjoyed the group-feedback we had to present on the basic steps of the ADDIE-model. Every presentation brought something new and valuable on the instructional design process (Table C.7.#4).</i>

Participant 2 and 3 commented on the way in which sharing ideas and learning from the presentations of other participants aided the instructional design process, and

helped them cope with the mastering of new technologies.

4.3.1.9 Summary: Theme 1

Throughout the narratives positivity is exuded like a golden thread and elicited questions about the link with emotional intelligence. These participants expressed their feelings, thoughts and emotions, shared their excitement, and transformed uncertainty and fear into optimism. What is highly significant is the absence of negative coping strategies such as distracting actions, avoidant actions and repression.

The next section will explore the thoughts, reasoning and emotions of the second group of participants in terms of theme 2.

4.3.2 Theme 2: Using positive and negative coping strategies

Participants in this group made use of both positive and negative coping strategies. The detailed sets of data of participants 5 and 9 are available in appendices E and G. Figure 4.4 summarises the sub-themes and categories within Theme 2.

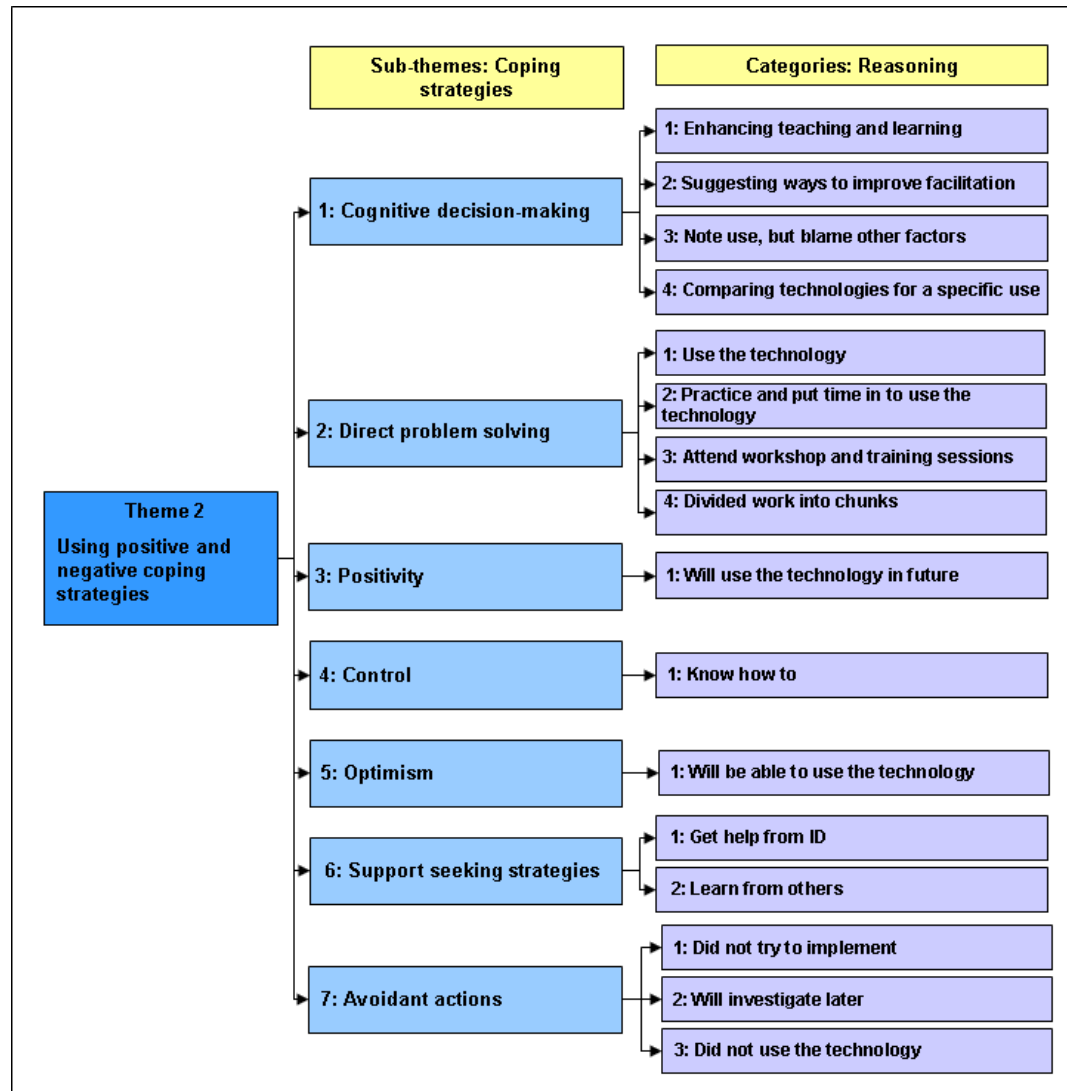


Figure 4.4 Summary of sub-themes and categories within theme 2

While mastering new technologies participants in this group made use of the coping strategies of cognitive decision-making, direct problem solving, positivity, control, optimism, and support seeking strategies, as well as avoidant actions.

4.3.2.1 Sub-theme 1: Cognitive decision-making

As with the participants in theme 1, this group of participants illustrated their reasoning about ways to solve a problem when confronted with the mastering of new technologies by using cognitive decision making as a coping strategy.

4.3.2.1.1 Category 1: Enhancing teaching and learning

As part of the use of cognitive decision-making as a coping strategy, participants thought of ways to enhance teaching and learning. Quotations regarding reasoning on ways in which technologies may enhance teaching and learning are presented in table 4.26.

Table 4.26 Enhancing teaching and learning

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-	Enhancing teaching and learning	P5: <i>The way in which the activity re e-testing was introduced was very creative (die suigstokkie-ding). From the discussions in the debate it was very clear that everybody is willing to use it, but also realise the limitations in certain circumstances. I am personally of the opinion that e-testing will be used - extensively - in 'normal' tests during the semester. However, I don't see that e-testing will feature in exams in the near future - due to all the 'negative' aspects mentioned during the debate (Table E.2.#13).</i>
			P9: <i>WebCT: It's a magnificent learning management system which can be tailor - made to suit individual needs. The features of the system provided me with some of the solutions to my teaching problems (Table I.2.#5).</i>

Participant 5 commented on e-testing and reasoned about the use and limitations of this form of testing, while participant 9 mentioned the application of WebCT in solving teaching problems.

4.3.2.1.2 Category 2: Suggesting ways to improve facilitation

With the use of cognitive decision-making, participants voiced concerns about factors within the programme which were hampering the coping process. Quotes relating to suggestions on ways in which to improve the programme are given in table 4.27.

Table 4.27 Suggesting ways to improve facilitation

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Suggesting ways to improve the facilitation	<p>P5: <i>After being occupied with homework for the whole weekend, 17 and 18 July, I came to the following conclusion: The presentations of new programmes are way to fast. It feels as if everything is rushed over to give me the "knowledge" of the existence of the programmes. However, I hardly understand any of the "workings" of these programmes. I battled through some of the homework and felt that I actually waste a lot of valuable time. Wouldn't it be better to start with the development of the subject/courses and then use what is available, in collaboration, with the ID's? I just wonder... maybe it's just my age, but I cannot even remember what we have done without looking at the programme! To me it is a matter of too much, too quickly, too little time, too little relevance (Table E.2.#2).</i></p> <p>P5: <i>One thing that bothers me: We received a lot of 'homework'. With that as such I have no problem. However, the time in which to complete it, is unrealistic. I do not mind to work during week ends, BUT unfortunately I do not have access to internet at home. That leaves me with all the work to do for Monday (21st). To do good, efficient work - irrespective of the depth of the assignment - I am of the personal opinion that we should receive enough (ample)time to complete assignments. It does not help to cram different tasks or exercises into a day or two - it creates unnecessary pressure and does not allow for optimum performance. I now have to "quickly" do all these assignments on Monday morning - afternoon, and have my doubts about the quality. On the other hand, I also have to work in a team, meaning that the quality of my inputs will have an effect on my team members. I prefer best quality at all times, but then we must have time! (Table E.2.#1)</i></p>

Participant 5 commented on the amount of homework given, and felt that it was a waste of time. The participant expressed the opinion that the presentations on new technologies were too rushed, and did not allow sufficient time to grasp the programmes. What is significant in this instance is the apparent inability to turn negative feelings into positive feelings.

Table 4.27 Suggesting ways to improve facilitation (cont.)

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Suggesting ways to improve the facilitation	<p>P5: <i>At first it was nerve-racking to think about presenting the "little" I have done so far. Eventually, it turned out to be not "that bad". I'm still worried about the little progress I have made up to now. After the blueprint I realized that there is a h... of a lot to do in very little time. I think I would prefer to actively start with the development of my subject, rather than to spend more precious time on homework. Not that the homework does not have a function! I just feel that the time I spend struggling to design a banner and graphics (because that is the homework) can be used much more productively in designing my subject! During the hands-on session in the internet lab, I again realised the value of these sessions. This is where we learn how to apply the tools - not with homework!</i></p> <p><i>Looking forward to really start with the contents of my subject (Table E.2.#15).</i></p>
			<p>P5: <i>As I did not manage to prepare all the banners and stuff with Corel and Frontpage I could not participate fully in the WebCT Designing session. Fortunetaly I got something from other files and could at least start doing something. This is the difficult part: If one does not understand the functioning and/or application of one thing, it is difficult to go on to the next. I don't appreciate being 'behind' - never was and never will be...! The hands-on session is the only way to learn to use everything. I don't think it is necessary for us to learn by trial-and-error. We don't have time to press all the wrong buttons before getting it right! Therefore I think all will appreciate a step-by-step layout of 'new' things to do and programmes to use (Table E.2.#8).</i></p>

Participant 5 was worried about the amount of development that still needed to be done, and argued about the merits of homework versus hands-on sessions in the facilitation of mastering new technologies. This participant focused on the amount of homework given, and was of the opinion that the homework, which involved designing a banner in FrontPage and CorelDraw, was unnecessary. The participant did not manage to complete the homework and was thus not prepared for the design session in WebCT. Participant 5 voiced concern about the way in which the session was handled, and suggested the option of providing a step-by-step guide that would aid the mastering of new technologies.

Table 4.27 Suggesting ways to improve facilitation (cont.)

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Suggesting ways to improve the facilitation	<p>P9: <i>I find hands on computer lesson too difficult to follow, due to the fact that 'what are we doing? and how its done? ie the buttons on the keyboard, in the head of the presenter. An ideal situation for me will be to have, what? on a piece of paper so as to understand the process and actually see what ist that I,m trying to execute step by step. Then I can struggle only with the ,How? (Table I.2.#1).</i></p> <p>P5: <i>Thank you, ..., for handing out a step-by-step guide to upload files on WebCT. It saved me another day of time-consuming suffering to get this right! At least I think I will be able to complete this part of the homework now! Thanks(Table E.2.#9).</i></p>

Participant 9 reiterated the request made by participant 5, as this participant had had difficulty following a lesson and also suggested that a step-by-step guide would be helpful.

Participant 10 compiled a step-by-step guide for the uploading of files in WebCT and handed it out to the rest of the group. Participant 5 commented on the use of this guide which saved time spent having to complete the task by trial and error.

Table 4.27 Suggesting ways to improve facilitation (cont.)

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Suggesting ways to improve the facilitation	<p>P5: <i>Wow! My hands were sweaty, my stomach had 'butterflies', my mouth was dry... All this for a 60 second video recording on anything!! I felt terrible before, during and after my video recording. As a matter of fact, I afterwards I felt completely incompetent and a total fool. Nothing I planned worked out! At least now I know how to prepare, for what to prepare, and what to do and not to do, if there will ever be another exercise like this. Although we had a lot of fun and many laughs, I would suggest the following: Make sure that a very clear message gets across with regards to preparation. My understanding (misunderstanding) was that we had to bring the props, etc. for the next worksession DURING WHICH we will be taught how to prepare and what to do and not to do. If I would have known that we had to be totally prepared, it might have been a more efficient experience to me. Now I feel that it was such a disaster, I would never consider doing a video production! (Table E.2.#12).</i></p>

As a consequence of a misunderstanding about the preparations that should have been done beforehand, participant 5 experienced the video recording session as distressing, and expressed dissatisfaction with the way in which the session had been conducted. The participant had felt incompetent and perceived the experience as a disaster, and, as a result, expressed a definite dislike of video productions. The participant expressed the fact of never again considering using a video production.

Table 4.27 Suggesting ways to improve facilitation (cont.)

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Suggesting ways to improve the facilitation	P9: <i>Insufficient time was allocated to microsoft front page, or was it meant to be a warm up exercise. I will appreciate a repeat of it (Table 1.2.#2).</i>
			P9: <i>HOT POTATO & WIMBA SESSION: I would like to use both softwares in my course development, the hands on session was too short. If times allows, I will appreciate a repeat session (Table 1.2.#3).</i>

Cognitive decision-making was also used as a coping strategy to comment on aspects or situations perceived as a hindrance in the process of mastering new technologies. The issue of too much homework was frequently mentioned. What is significant is the difference in the ways in which the problem was broached.

An observation concerning the approach used by participants to convey their opinions about ways in which to improve the programme is the positive approach rather than the negative approach of certain participants. Could there be a link with emotional intelligence?

4.3.2.1.3 Category 3: Note use, but blame other things

As with the previous groups the usefulness of the technology was noted, but other factors blamed for the inability to cope adequately. Table 4.28 presents the quotes noting the use of blogging, but blaming other factors.

Table 4.28 Note use but blame other things

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Note use, but blame other things	<i>P5: Today I realised that I haven't blogged for more than a month. Sorry guys - for those of you who need this info for research, etc. Why haven't I blogged: At some stage everything became too much! It was bloggers and surveys and homework and course development and battling to get to know how to operate new programs and deciding on a research project, writing a proposal, thinking about video production, etc., etc. Do you really blame us for not blogging?! (Table E.2.#3).</i>

Although aware that blogging was of use to the other participants, participant 5 blames the pace of the programme for not having blogged regularly. It would appear that participant 5 experienced the amount of homework together with the other tasks that needed to be completed within the programme as too onerous. The negative tone and frustration of this narrative is significant.

4.3.2.1.4 Category 4: Comparing technologies for a specific use

As more than one technology was available for a specific use participants compared technologies in terms of ease of use. Table 4.29 presents the reasoning of participant 5.

Table 4.29 Comparing technologies for a specific use

Theme	Sub-theme	Category	Quotation
2	Cognitive decision-making	Comparing technologies for a specific use	<i>P5: I enjoyed the hands-on session on Perception, but I doubt whether I would use that in stead of Respondus! (Table E.2.#10).</i>

As was the case with participants in the previous group, participant 5 expressed a preference for Respondus, perceiving it to be more user-friendly than Perception.

4.3.2.2 Sub-theme 2: Direct problem solving

In conjunction with the group of participants in theme 1, participants in theme 2 also made use of direct problem-solving coping strategies when they felt familiar with the use of a particular technology.

4.3.2.2.1 Category 1: Use the technology

As in the previous group, participants apparently experienced no problems using a technology they perceived as user-friendly. Table 4.30 provides quotes pertaining to the use of technologies.

Table 4.30 Use the technology

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Use the technology	P5: <i>Yahoo: Most frequently used of all technology tools!!! I enjoy Yahoo because it is a form of 'contact' with the Partners and ID's. Quick and easy way to ask a question and get an immediate answer or just to find out how someone else is doing. Use it!</i> <i>Enjoyable and usable, effective. (Table E.3.#4).</i>
			P5: <i>Respondus: Empowering, save a lot of time - efficient.</i> <i>Listening skills and exercise</i> <i>Empowering. (Table E.3.#2).</i>
			P9: <i>Respondus: It has a friendly environment, most of my assessments were created using respondus. Impressed by the technology at first sight (Table I.3.#5)</i>
			P5: <i>WebCT: Empowering, boost in self-confidence, efficient</i> <i>Conscientiousness, motivated and inspired by ... (ID), hel from ... (ID) (Table E.8.#3).</i>

A question that arises from the observation that, once a technology has been perceived as user friendly, no problems will be experienced in mastering the technology is the impact of this fact on the facilitation of a particular technology. What can be done to ensure that participants experience a specific technology as user friendly?

4.3.2.2.2 Category 2: Practice and put time in to use the technology

As was the case with the previous group of participants, these participants had no problem practising and spending extra time in the case of a technology perceived to be user friendly. Quotes pertaining to the practising and spending time in using the technology are presented in table 4.31.

Table 4.31 Practice and put time in to use the technology

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Practice and put time in to use the technology	P9: <i>Front Page: I enjoyed using the software. The beauty of the program made me sit endless hours on the computer. I had to explore the bars and dropdown menu lists of Microsoft office (Table 1.3.#3)</i>
			P9: <i>Corel Draw: It was very useful in addressing graphic problems on my web pages. Practice (Table 1.3.#2).</i>

What is significant is the positive way in which participant 9 mentioned that, due to the usability of the technology, practice and exercise were no problem. As regards the impact of this fact on the facilitation of new technologies: instructional designers should take cognisance of the effect in terms of usability on the mastering of new technologies. How would it be possible to improve on the facilitation of a new technology in order to highlight possible ways of using the technology?

4.3.2.2.3 Category 3: Attend workshops and training sessions

An important facet that emerged and was seen as a hindrance to effective coping on the part of certain participants was their initial perceptions and the way in which the facilitator introduced the technology. Table 4.32 presents quotes pertaining to attending workshops and training sessions.

Table 4.32 Attend workshops and training sessions

Theme	Sub-theme	Category	Quotation
2	Direct problem-solving	Attend workshops and training sessions	P5: <i>Front Page: The importance of FP only struck me when I had to upload material onto WebCT. I realised then that I needed the skill long ago. After ...'s explanation I understood why it was needed. Now it forms a crucial part of my preparations and development of material. Very empowering and satisfying. It is a pity that the importance was not emphasised from the beginning. The initial training session was disastrous. I perceived the presenter as impatient and did not dare to ask questions! I attended the additional lecture by.... and "n lig het toe opgegaan"! Good feeling to be able to use the programme in development work (Table E.3.#1).</i>

Participant 5 had perceived the presenter as impatient, and, as a result, had not asked questions. Consequently, the participant had had to attend an additional lecture.

4.3.2.2.4 Category 4: Divided work into sections

Some of the participants mentioned the methods they had used in order to master the technologies, namely, taking it step by step. Table 4.33 presents the quotes pertaining to the division of work into sections.

Table 4.33 Divided work into sections

Theme	Sub-theme	Category	Quotation
2	Direct problem solving	Divided work into chunks	P9: <i>I divided my tasks into chunks. Began with the easiest then proceeded to more challenging tasks (Table 1.3.#1).</i>

The positive way in which participant 9 recounted coping with tasks – dividing the tasks into sections and doing the easiest first before proceeding with the more challenging chunks – is significant.

4.3.2.3 Sub-theme 3: Positivity

Positivity as a coping strategy entails thinking about the good things that have happened. The use of positivity enables participants to view a situation in a positive light, and focus on positive thoughts.

4.3.2.3.1 Category 1: Will use the technology in future

Table 4.34 contains quotes dealing with the future use of technologies.

Table 4.34 Will use the technology in future

Theme	Sub-theme	Category	Quotation
2	Positivity	Will use the technology in future	P5: <i>Today was very educational. I enjoyed the Yahoo-session especially. We got a chance to really "link" with each other. Great fun and I think it can also be very useful (Table E.5.#1).</i>
			P5: <i>I was aware of a book available in, but it was impressive to see how many different aspects are covered online. This will make my life a lot easier in developing the course for !! Good exercise. I will get a lot more when I am actually starting to work (Table E.5.#3).</i>
			P5: <i>The graphics was a little quick, but at least I know about the existence of many great things to use without a lot of difficulty (Table E.5.#5)..</i>

Table 4.34 Will use the technology in future (cont.)

Theme	Sub-theme	Category	Quotation
2	Positivity	Will use the technology in future	<i>P5: After has explained the generic development of a blueprint document structure, I experimented with the concept in flow diagrams, keeping my own subject in mind. It did make sense to start planning everything on paper. By looking at these very rough blocks and arrows on paper I could see something is actually happening in my mind (Table E.5.#4).</i>

Participant 5 expressed enjoyment and appreciation about the use of the Yahoo messenger – linking with co-participants, the availability of online resources for the development of course material, and the practical development of a blueprint structure. The perception that a technology was beneficial resulted in positive thinking.

4.3.2.4 Sub-theme 4: Control

Control as a coping strategy entails that, due to previous experience, the participant is able to deal with a problem.

4.3.2.4.1 Category 1: Know how to

Table 4.35 presents the quote pertaining to knowing how to use the specific technology.

Table 4.35 Know how to

Theme	Sub-theme	Category	Quotation
2	Control	Know how to	<i>P5: Video: Previously employed in classes. Good feeling to be able to give feedback to students (Table E.6.#1).</i>

Participant 5 reflected on past experiences and reasoned that prior experience with a technology enhances the enjoyment derived from using the specific technology.

4.3.2.5 Sub-theme 5: Optimism

Optimism as a coping strategy was used by participants to regard the future positively and optimistically.

4.3.2.5.1 Category 1: Will be able to use the technology

Table 4.36 presents a quote dealing with the ability to use a specific technology in the future.

Table 4.36 Will be able to use the technology

Theme	Sub-theme	Category	Quotation
2	Optimism	Will be able to use the technology	P9: <i>Creating a webct folder was exciting, its one of the hands on exercises that has made feel good and confident. At the end of the day I had completed my task successfully. I'm looking forward to more exciting events that will be as successful as the webct folders (Table I.4#1).</i>

The successful creation of a folder in WebCT empowered participant 9 who, as a result, experienced positive emotions in terms of feeling confident and good. This led to the participant expressing optimism and positive thinking as regards future events.

4.3.2.6 Sub-theme 6: Support seeking strategies

A support seeking coping strategy used by the participants entailed *support for actions*. The use of this coping strategy involves the use of other people as a sounding board or as a resource in seeking solutions for a specific problem.

4.3.2.6.1 Category 1: Get help from instructional designer

When they encountered problems with mastering a technology, participants relied on the help of the instructional designers or other participants in the Partners@Work programme. Table 4.37 deals with eliciting help and support from the instructional designer.

Table 4.37 Get help from instructional designer

Theme	Sb-theme	Category	Quotation
2	Support seeking strategies	Get help from instructional designer	P5: <i>Conscientiousness, motivated and inspired by ... (ID), hel from ... (ID). Excellent explanation of how to use by ID. Ek voel gemaklik met die nuwe vaardigheid, maar weet ook dat ek op die 'back-up' van my IO kan steun sou ek probleme ervaar (Table E.8.#3).</i>

Participant 5 commented positively about receiving help from the instructional designer, and expressed awareness that support from the instructional designer was available, should it be needed.

4.3.2.6.2 Category 2: Learn from others

Participants valued the Show and Tell sessions during which they learnt from each other. This is expressed in the quote presented in table 4.38.

Table 4.38 Learn from others

Theme	Sub-theme	Category	Quotation
2	Support seeking strategies	Learn from others	P9: <i>The presentations were excellent, creativity was displayed by some of my colleagues. I learnt new ways of approaching my work. It was really encouraging and fulfilling to receive positive responses from you (Table 1.6.#1).</i>
			P9: <i>I always look forward to this session. It gives us an opportunity to share and reflect on our experiences as we develop materials. I found it to be very interesting, for me that's where actual learning takes place (Table 1.6.#2).</i>
			P5: Show and Tell: <i>A good way of getting ideas of what can be done and what will work for one's own programme (Table E.8.#8)</i>
			P5: <i>The Show & Tells are always very interesting. Each partner has his/her own individual approach and this makes the program unique. I don't think that it will ever be possible to "standardise" courses or subjects because each one has its own requirements and possibilities. One can use ideas from other courses, but eventually will have a own unique program (Table E.8.#9).</i>
			P5: <i>I am looking forward to each Tuesday - not only to see and hear about the work that has been done and new work to come, but also to feel 'at home' with people who are good to be with, who share – in many ways – and who are also fun to be with while learning from them. I feel like being part of a huge, friendly family! Thank you all! (Table E.8.#10).</i>

Both participants expressed their enjoyment and gratitude as regards sharing and learning from other participants during the Show and Tell sessions in the Partners @Work programme. During these sessions participants experienced support from and gave support to one another, thus forming a strong social support group.

4.3.2.7 Sub-theme 7: Avoidant actions

Participants made use of avoidant actions as a coping strategy – either avoiding or staying away from a problem.

4.3.2.7.1 Category 1: Did not try to implement

Table 4.39 presents quotes pertaining to the reasons for not implementing a technology.

Table 4.39 Did not try to implement

Theme	Sub-theme	Category	Quotation
2	Avoidant actions	Did not try to implement	P5: <i>Video conferencing: Presenter not too positive or clear with regards to usability – therefore not considered as an option to use. No mastering necessary. Seems to me that other persons have to do the work – I just need to be there....? Still not clear where it will fit in. Did not really try to implement. Previous attempt (prior to P@W) failed. Not interested (Table E.7.#1)</i>
			P9: <i>Video Conferencing: Too terrified to think of one. The last item to attempt on my list (Table I.5.#2).</i>

Participant 5, had perceived the presenter as “not too positive or clear” regarding the usability of video conferencing and this, together with a failed previous attempt, resulted in this participant not being interested in video conferencing. Participant 9 expressed the fact that of being too afraid to even think about doing a video conference and listed it last on the list of technologies to be attempted. This raises an important aspect in the facilitation of new technologies, namely, the role of the presenter in the way in which participants will come to perceive the new technology.

4.3.2.7.2 Category 2: Will investigate later

Table 4.40 presents a quote illustrating reasoning about avoidant action by proposing to investigate the implementation of a technology at a later date.

Table 4.40 Will investigate later

Theme	Sub-theme	Category	Quotation
2	Avoidant actions	Will investigate later	P5: <i>Camtasia seems to be very easy to use. Will try it out later... if needed...</i> (Table E.7.#3).
			P9: <i>Video: Not yet explored. Awaiting the results of the scripts submitted</i> (Table I.5.#1).

Participants 5 and 9 both mentioned Camtasia and video as technologies that they had not used, but would investigate at some stage in the future.

4.3.2.7.3 Category 3: Did not use the technology

Table 4.41 presents a quote on not using a technology.

Table 4.41 Did not use the technology

Theme	Sub-theme	Category	Quotation
2	Avoidant actions	Did not use the technology	P5: <i>Corel Draw: Not used. Cannot remember when it was done!!</i> (Table E.10.#5).

Participant 5 had previously voiced dissatisfaction about having to use CorelDraw to design a banner, and, in the following session, had not had the work done, as he had not completed the homework. In contrast with this, the participant now stated that he had not used the technology and could not remember when it had been dealt with.

4.3.2.8 Summary: Theme 2

What is significant in this group of participants is the use of positive coping strategies when the technology was perceived as user friendly, and negative coping strategies when the technology was perceived as either difficult or not necessary. Participant 9 had used avoidant coping strategies when the technology had been perceived as difficult. Participant 5 focused negatively on the presenter in the case of video conferencing, and had had an issue with homework being given. Although receiving help from the instructional designers was an integral part of the programme, participant 9 did not mention eliciting help or support from the instructional designers as part of support seeking coping strategies.

The next section of the chapter contains an exploration of the thoughts, reasoning and emotions of the participants grouped in theme 3.

4.3.3 Theme 3: Using negative and no positive coping strategies

Participants in this group made use of negative coping strategies. The detailed sets of data of participants 1, 7 and 10 are available in appendices A, G and J. Figure 4.5 summarises the sub-themes and categories within theme 3.

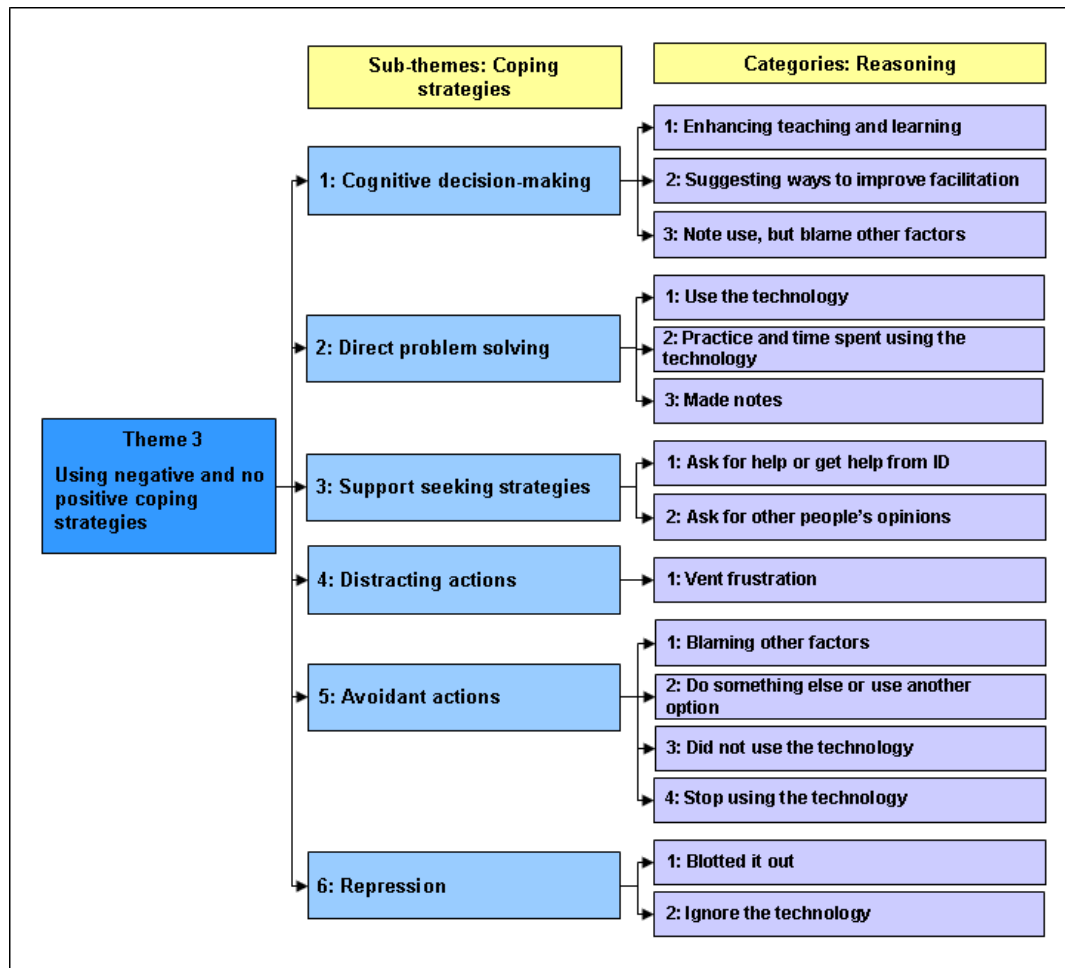


Figure 4.5 Summary of sub-themes and categories within theme 3

Participants 1, 7 and 10 made use of cognitive decision-making, direct problem solving, support seeking strategies, distraction actions, avoidant actions and repression as coping strategies. This group of participants did not use any positive cognitive reframing coping strategies.

4.3.3.1 Sub-theme 1: Cognitive decision-making

Cognitive decision-making entails thinking about the best ways to solve a perceived problem.

4.3.3.1.1 Category 1: Enhancing teaching and learning

As with the participants in the previous groups, participants in this group linked the use of the technology to their own field as an enhancement of the teaching and learning process. Table 4.42 contains quotes pertaining to the enhancement of teaching and learning.

Table 4.42 Enhancing teaching and learning

Theme	Sub-theme	Category	Quotation
3	Cognitive decision-making	Enhancing teaching and learning	P10: <i>Task and assignments and their due date is a part of the learning area which is also very important, especially if the student missed the lesson he/she can use WebCT for reverence. The LMS also made provision to manage working groups and report back can be done by the students. It helps me to manage my class room activities much more effectively (Table J.2.#1).</i>
			P1: <i>Respondus is far more user friendly [sic] than e-testing on webct. I think the students will find it easier too. Want to have a careful look and see what qualities make it so user friendly and then try to incorporate these elements in my programme that I am developing.(Table A.2.#6)</i>
			P1: <i>E-testing will be a saving grace. Students can do tests in their own time with the random aspect.it will save tremendous time on marking.(Table A.2.#7)</i>
			P7: <i>Respondus: Great, this was the answer to my dreams. The program did exactly what I wanted. Easy to operate and upload to WebCT (Table G.3.#4).</i>
			P7: <i>WebCT: The feedback from the students was tremendous. There was lots of praise for the course material, which was written in such a way that it was easily understood. From an educational point of view, this was extremely good, because the student obtained instant feedback from the Internet and from the lecturer who facilitated the Internet sessions.</i>
			<i>Students where delighted with the Quizzes and especially with the Examinations, where they obtained their results immediately (Table G.5.#7).</i>

Participant 10 reasoned about the ways in which WebCT as a learning management system may possibly be of assistance in the effective management of classroom activities. Participants 1 and 10 commented on the use of Respondus, e-testing and WebCT as learning management systems.

An important element in the reasoning is the positive way of thinking about ways in which the use of specific technologies could benefit the participants in the development of teaching and learning materials for their courses.

4.3.3.1.2 Category 2: Suggesting ways to improve facilitation

In the process of mastering the different technologies, participants identified areas that could improve facilitation. The suggestions made regarding the improvement of the facilitation process when introducing new educational technologies signified cognitive thinking on possible ways in which to solve problems. Of significance here is the difference in positivity shown by participants in this group and participants in group 1 when voicing their suggestions on ways in which to improve the facilitation of new technologies. Table 4.43 presents quotes on suggesting ways to improve facilitation.

Table 4.43 Suggesting ways to improve facilitation

Theme	Sub-theme	Category	Quotation
3	Cognitive decision-making	Suggesting ways to improve the facilitation	P1: <i>IN FUTURE IN CLASS: REPETITION AND AN EXERCISE ON PRE-KNOWLEDGE</i> (Table A.2.#1).
			P1: <i>Would like to have revision sessions before we start with new computer skills</i> (Table A.2.#2).
			P1: <i>Found the first part of the hands on programme extremely useful as it was a revision of uploading work to WEBCT. Got slightly lost during the creating of our own courses in WebCT.</i> (Table A.2.#8).

The suggestions on ways in which to improve the facilitation process were sometimes very loud and clear. Repetition and exercises on pre-knowledge, with the emphasis on the importance of the use of capital letters, were strongly advocated.

What is significant in this instance is the negative way in which participants conveyed their thoughts about ways in which to improve the programme – this is in direct contrast

to the positivity shown by participants in theme 1. Could there be a link with emotional intelligence?

4.3.3.1.3 Category 3: Note use, but blame other factors

Table 4.44 presents reasoning as regards noting the use of a technology but blaming other factors for the decision not to use the technology.

Table 4.44 Note use, but blame other things

Theme	Sub-theme	Category	Quotation
3	Cognitive decision-making	Note use, but blame other factors	P7: <i>Yahoo Messenger: Very useful to communicate but I don't like it for the same reason I do not like e-mail. It wastes a lot of my time, which I don't have a lot of. Workload problems (Table G.2.#1).</i>

On a different note participant 7 mentioned how useful Yahoo messenger is for purposes of communication, but voiced an unequivocal dislike of technology, viewing it as waste of time. Important to note in this instance, is that despite having a computer, the participant chose to write the prompted essay, not typing it and sending it to the ID as requested.

The question thus arises as to how an aversion to technology in general would influence the mastering of new technologies. Does not being able to see the benefit of using technology link to emotional intelligence in some way? Could the difference between commenting in a positive way and the negative blaming of circumstances be attributed to a specific branch in the emotional intelligence scores of the participants?

4.3.3.2 Sub-theme 2: Direct problem solving

As with the participants in the other groups, it would appear that this particular coping strategy was preferred in times of highly perceived self-efficacy.

4.3.3.2.1 Category 1: Use the technology

Table 4.45 presents quotes on the use of a technology.

Table 4.45 Use the technology

Theme	Sub-theme	Category	Quotation
3	Direct problem solving	Use the technology	P1: <i>Yahoo was excellent. I enjoyed it very much as I managed to keep up most of the time. I find I have to stop myself from delving into the websites and losing track of what is going on (Table A.3.#3).</i>
			P7: <i>Respondus: Great, this was the answer to my dreams. The program did exactly what I wanted. Easy to operate and upload to WebCT (Table G.3.#4).</i>
			P1: <i>Blogger: Easy. Worthwhile tool. (Table A.3.#4).</i>
			P10: <i>Respondus: Het Respondus baie positief beleef en user friendly .(Table J.3.#3).</i>
			P1: <i>Front page: Enjoyed this. Felt able and competent (Table A.9.#1).</i>
			P1: <i>Repondus: Felt I could cope with it and master it. (Table A.9.#3).</i>

It would seem that, if a particular technology were perceived as user friendly, the participants would enjoy this technology and use it extensively. The observation that once a technology is perceived as user friendly no problems are experienced in mastering the technology gives rise to a question regarding the impact of this on the facilitation of a technology. What could be done to ensure that participants experience a technology as user friendly?

4.3.3.2.2 Category 2: Practice and time spent using the technology

As with the previous cases the participants had no problem practising and spending extra time if the particular technology were perceived as user friendly. Table 4.46 pertains to quotes on practising and spending time using a technology.

Table 4.46 Practice and time spent using the technology

Theme	Sub-theme	Category	Quotation
3	Direct problem solving	Practice and time spent using the technology	P1: <i>Respondus: No problem with practice (Table A.3.#1).</i>
			P1: <i>Yahoo was excellent. I enjoyed it very much as I managed to keep up most of the time. I find I have to stop myself from delving into the websites and losing track of what is going on (Table A.3.#3).</i>

Note the positive way in which participants mentioned that, due to the usability of the technology, practice and exercise presented no problems. As regards the impact of this on the facilitation of new technologies, instructional designers should take cognisance of the effect that usability has on the mastering of new technologies. How could the facilitation of a new technology be improved in order to highlight possible ways in which the technology could be used?

4.3.3.2.3 Category 3: Made notes

Table 4.47 deals with the making notes as a coping strategy in mastering a new technology.

Table 4.47 Made notes

Theme	Sub-theme	Category	Quotation
3	Direct problem solving	Use the technology	<i>P7: I made careful notes on the operating instructions, then, when I got home, I tried to do it again using the instructions which I then modified to be more precise (Table G.3.#1).</i>

Participant 7 made notes and compiled a step-by-step guide which was then handed out to the other participants.

The use of direct problem-solving coping strategies is reflected in the efforts made by participants to improve the situation – either by making notes, dividing work into chunks, looking for a manual, practising or experimenting.

4.3.3.3 Sub-theme 3: Support seeking strategies

The support seeking coping strategy used by the participants entailed *support for actions*. The use of this coping strategy involves seeking out another person as a sounding board or as a resource in looking for solutions for a specific problem.

4.3.3.3.1 Category 1: Ask for help or obtain help from instructional designer

When encountering problems with mastering a technology, participants relied on the help of the instructional designers or other participants in the Partners@Work

programme. Quotes in Table 4.48 deal with requesting help or obtaining help from the instructional designer (ID) as a coping strategy.

Table 4.48 Ask for help or obtain help from instructional designer

Theme	Sub-theme	Category	Quotation
3	Support seeking strategies	Ask for help or get help from instructional designer	P1: <i>Blogger: Asked fellow partners to help</i> (Table A.7.#1)
			P1: <i>Had an interesting conversation with ... on the stairs. Want to look at what is available in Pearsons in depth before I start developing. ... example of a string of beads is very relevant.</i> (Table A.7.#3)

Participant 1 mentioned asking fellow partners for help as a coping strategy in mastering the use of Blogger. This participant also referred to a discussion with the instructional designer as being relevant to the development of course material.

4.3.3.1.2 Category 2: Ask for people's opinions

Table 4.49 presents reasoning on asking for people's opinions.

Table 4.49 Ask for people's opinions

Theme	Sub-theme	Category	Quotation
3	Support seeking strategies	Ask for people's opinions	P1: <i>Need to get the lecturers in the subject on all campuses to buy into programme. Have to ask for their inputs</i> (Table A.7.#2).

Participant 1 commented on the need to convince other lecturers on all the campuses to buy into the programme and to ask for their input in the development of course material.

Despite the fact that help from the instructional designers constituted part of the programme, participants 7 and 10 did not mention the use of support seeking coping strategies.

4.3.3.4 Sub-theme 4: Distracting actions

Distracting actions entail doing something in order to avoid thinking about the situation that is perceived as problematic.

4.3.3.4.1 Category 1: Vent frustration

Table 4.50 deals with venting frustration as a coping strategy.

Table 4.50 Vent frustration

Theme	Sub-theme	Category	Quotation
3	Distracting actions	Vent frustration	P1: <i>Blogger: Felt heard. It was good to let go of frustrations and emotions (Table A.4.#1)</i>

Participant 1 made use of Blogger to vent frustrations and air emotions. In writing about frustrations participant 1 made use of distracting actions as a functional coping strategy.

4.3.3.5 Sub-theme 5: Avoidant actions

The use of avoidant actions as a coping strategy enabled participants to make an effort to stay away from the problem.

4.3.3.5.1 Category 1: Blaming other factors

Quotes relating to assigning blame to other factors as a reason for not coping are presented in table 4.51.

Table 4.51 Blaming other factors

Theme	Sub-theme	Category	Quotation
3	Avoidant actions	Blaming other factors	P1: <i>... was in my office on Wednesday and my computer settings have only been changed by our assistant today. Could thus not work on Wednesday and Thursday. Two days wasted and I am so slow! I want to scream with frustration. It means I will have to come into the office over the weekend. It also means that, if I struggle, I cannot phone the mentors as it is a weekend. I am becoming quite depressed (Table A.5.#1).</i>
			P7: <i>Blogger: I was ...and could not remember the password even though I wrote it down, I kept on losing it and forgetting. I did however write my Blogs down on the program page which was handed out each week. I was <u>very (underlined heavily)</u> frustrated by not being able to get into Blogger (Table G.4.#9).</i>

What is significant here is the way in which these participants refrain from taking responsibility, and blame circumstances for their inability to cope.

4.3.3.5.2 Category 2: Do something else or use another option

Table 4.52 present quotes pertaining to doing something else or using another option.

Table 4.52 Do other things or use another option

Theme	Sub-theme	Category	Quotation
3	Avoidant actions	Do other things or use another option	P1: Video conferencing: Found it ineffective so rather tried to spend time on items I found effective (Table A.5.#5).
			P1: Video conferencing: Don't mind others using it. Me not. Will rather travel for the of camera interaction which is often more useful (Table A.5.#7).

Participant 1 perceived video conferencing as ineffective and stated the intention not to use it. This participant would rather travel than use the technology.

4.3.3.5.3 Category 3: Did not use the technology

Table 4.53 contains quotes relating to giving reasons for not using a technology.

Table 4.53 Did not use the technology

Theme	Sub-theme	Category	Quotation
3	Avoidant actions	Did not use the technology	P7: There are a couple of Technologies like Camtasia, Perception and Blogger that did not want to work as described by the instructors. They frustrated me (Table G.4.#6)
			P1: Corel draw: Lost, haven't a clue (Table A.5.#8)
			P10: Video: Nog nie gebruik (Table J. 4.#2).
			P10: Video: Voel nie die nodigheid vir my vak om te gebruik (Table J. 4.#4).
			P10: Perception: Nie van toepassing op my vakgebied nie- het dit ook nie gebruik nie (Table J. 4.#3).
			P10: Perception: Nog nie bemeester nie (Table J. 4.#1).
			P10: Video conferencing: Voel dis nie nodig om te gebruik in my vak nie (Table J. 4.#5).

Participant 7 cited Camtasia, Video and Blogger as technologies not used, and indicated frustration that the technologies had not worked as expected. Participant 1 had had negatives experiences of CorelDraw, and felt totally lost with no idea of how to use it. Participant 10 named Video, Perception and Video conferencing as technologies not used as this participant did not perceive these technologies to be useful. Note the negative feelings – could negative perception and avoidant actions as a coping strategy be linked to lower emotional intelligence?

4.3.3.5.4 Category 4: Stop using the technology

Table 4.54 pertains to reasoning as to why a technology was no longer used.

Table 4.54 Stop using the technology

Theme	Sub-theme	Category	Quotation
3	Avoidant actions	Stop using the technology	P10: <i>Blog: Gebruik nie meer- dink dit is nie meer nodig</i> (Table J. 4.#6).

Participant 10 had stopped blogging, and gave as a reason for this the fact that it was no longer necessary.

4.3.3.6 Sub-theme 6: Repression

Repression as a coping strategy means that participants try to put the problem out of their minds and not think about it.

4.3.3.6.1 Category 1: Blotted it out

Table 4.55 presents quotes dealing with blotting out thoughts about a perceived problem.

Table 4.55 Blotted it out

Theme	Sub-theme	Category	Quotation
3	Repression	Blotted it out	P1: <i>Camtasia: Blotted it out as I found it above me, together with the other information overload</i> (Table A.6.#2)

Feeling lost and out of depth participant 1 blotted out all thoughts of Camtasia. The

question arises as to how negative emotional experiences are linked with avoidance coping strategies and EI?

4.3.3.6.2 Category 2: Ignore the technology

Table 4.56 illustrates the coping strategy of simply ignoring the problem.

Table 4.56 Ignore the technology

Theme	Sub-theme	Category	Quotation
3	Repression	Ignore the technology	P1: <i>Perception: Ignored it – spent my time on things I could do and rather mastered them (Table A.6.#3).</i>

Participant 1 had perceived Perception negatively and so simply ignored it and spent time on elements perceived as user friendly.

4.3.3.7 Summary: Theme 3

Participants in the group in theme 3 made use of problem focused coping strategies when the technology had been perceived as user friendly. Avoidance coping strategies were used if the technology were perceived as too difficult or not necessary for a particular course. What is significant in this group of participants is the lack of positive reconstructive coping strategies.

The next section of the chapter contains a summary of the emotional intelligence scores of participants as measured by the emotional intelligence instrument, MSCEIT™.

4.4 Emotional intelligence scores

Emotional intelligence scores consist of three different scores, namely, a total score, two area scores and four branch scores. The scores are interpreted in a qualitative way as is illustrated in table 4.57.

Table 4.57 Qualitative range of EI scores

EI Score	Qualitative range
69 or less	Consider development
70-89	Consider enhancement
90-99	Average score
100-109	High average score
110-119	Effective functioning
120-129	Strength
130+	Significant strength

Colour codes for the different ranges have been used to assist in categorising the scores.

4.4.1 Total score

The total score of participants are given in table 4.58.

Table 4.58 Total EI scores

Emotional Intelligence scores	Participants									
	1	2	3	4	5	6	7	8	9	10
Total	85	108	97	88	98	90	92	100	84	95

From table 4.3 it is evident that the total EI scores fall into three qualitative ranges, namely *consider enhancement*, *average score* and *high average score*. The scores of participants 1, 4 and 9 fall within the *consider enhancement* range. The scores of five of the participants, 3, 5, 6, 7 and 10, fall within the *average score* range. Two of the participants only, 2 and 8, have total scores in the *high average score* range.

4.4.2 Area scores

Area scores consist of two different scores, namely, experiential and strategic.

4.4.2.1 Experiential

Scores of the experiential area are presented in table 4.59.

Table 4.59 Experiential area scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Area	Experiential	88	117	103	85	102	89	107	113	81	108

The experiential area scores comprise three different qualitative ranges. The scores of participants 1, 4, 6 and 9 fall into the *consider enhancement* range. The scores of participants 3, 5, 7 and 10 fall into the *high average score* range. Again the scores of two participants only, 2 and 8, fall into the *effective functioning* range.

4.4.2.2 Strategic area scores

Table 4.60 represents the strategic area scores of the participants.

Table 4.60 Strategic area scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Area	Strategic	86	95	92	94	91	93	83	89	90	85

The strategic area scores consist of two qualitative ranges. The scores of participants 1, 7, 8 and 10 fall into the *consider enhancement* range. The remainder of the participants, 2, 3, 4, 5, 6, and 9 have strategic score in the *average score* range.

4.4.2 Branch scores

Branch scores consist of perceiving emotion, facilitating emotion, understanding emotion and managing emotions.

4.4.2.1 Perceiving emotion

The branch scores for perceiving emotion are presented in table 4.61.

Table 4.61 Perceiving emotion scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Branch	Perceiving	90	108	100	77	112	90	104	110	90	109

The perceiving emotion scores of the participants fall into four different ranges. The only score in the *consider enhancement* range is that of participant 4. The scores of participants 2, 3, 5, 7 and 10 fall into the *high average* range. Participant 8 only has a perceiving emotion score in the *effective functioning* range.

4.4.2.2 Facilitating emotion

The branch scores for facilitating emotion are presented in table 4.62.

Table 4.62 Facilitating emotion scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Branch	Facilitating	88	121	105	102	90	90	108	112	78	101

The facilitating emotion scores of the participants comprise five different qualitative ranges. The scores of participants 1 and 9 fall within the *consider enhancement range*. The scores of participants 5 and 6 are within the *average score* range. Participants 3, 4, 7 and 10 have scores in the *high average* range. The facilitating emotion scores of participants 8 and 2 are in the *effective functioning* and *strength* range respectively.

4.4.2.3 Understanding emotion

The branch scores for understanding emotion are presented in table 4.63.

Table 4.63 Understanding emotion scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Branch	Understanding	81	96	93	91	92	100	91	103	90	77

The understanding emotions scores of the participants fall within three qualitative ranges. Participants 1 and 10 have scores in the *consider enhancement* range. The

scores of participants 2, 3, 4, 5, 7, and 9 fall within the *average score* range. The scores of participants 6 and 8 only are in the *high average* range.

4.4.2.4 Managing emotions

The branch scores for managing emotions are presented in table 4.64.

Table 4.64 Managing emotions scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Branch	Managing	96	98	94	100	93	91	81	83	93	101

Managing emotions scores encompass three qualitative ranges. The scores of participants 7 and 8 are within the *consider enhancement* range. Participants 1, 2, 3, 5, 6, and 9 have scores in the *average score* range, while the scores of participants 4 and 10 in the *high average score* range.

4.4.4 Summary of EI scores

Table 4.65 provides a summary of the EI scores of the participants.

Table 4.65 Summary of EI scores

Emotional Intelligence scores		Participants									
		1	2	3	4	5	6	7	8	9	10
Total		85	108	97	88	98	90	92	100	84	95
Area	Experiential	88	117	103	85	102	89	107	113	81	108
	Strategic	86	95	92	94	91	93	83	89	90	85
Branch	Perceiving	90	108	100	77	112	90	104	110	90	109
	Facilitating	88	121	105	102	90	90	108	112	78	101
	Understanding	81	96	93	91	92	100	91	103	90	77
	Managing	96	98	94	100	93	91	81	83	93	101

From the table it is evident that there is great variation in the individual scores of the participants and no obvious groupings are evident. The next section presents the emotional intelligence scores of the participants in terms of the Emotional Coping Hierarchy according to Salovey and colleagues (1999).

4.5 Emotional Coping Hierarchy

Salovey and colleagues developed a hierarchy of emotional competencies to “facilitate the application of emotional intelligence to the coping process” (Salovey *et al.*, 1999, p. 146). Included in this hierarchy are the competencies of emotional intelligence most relevant to the coping process as adapted by the researcher and discussed in chapter 2 §2.8. Figure 4.6 provides an illustration of the relevant competencies of emotional intelligence in the emotional coping hierarchy used in this study.

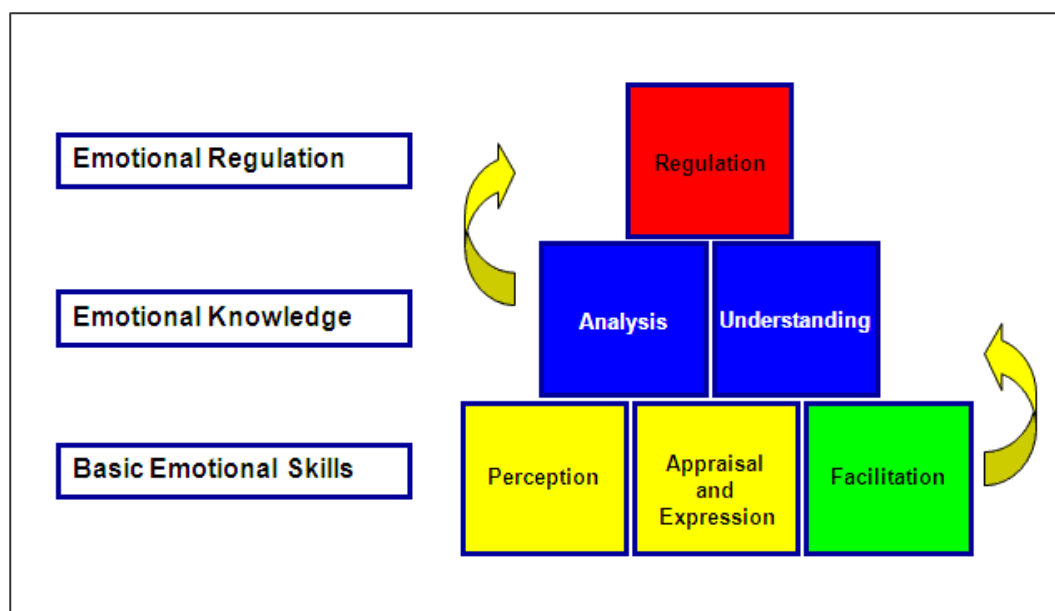


Figure 4.6 The Emotional Coping Hierarchy

Source: Adapted from (Salovey *et al.*, 1999, p. 146).

The basic emotional intelligence skills of perception, appraisal, expression and facilitation are on the first level of the emotional coping hierarchy. Understanding and analysis, which, according to Salovey *et al.* (1999), are more sophisticated subcomponents of emotional knowledge, are on the second level. Emotional regulation is placed on the third level. In order for successful coping to take place the authors believe that the “*entire* hierarchy of emotional coping skills must be successfully developed and employed” (Salovey *et al.*, 1999, p. 146) (my emphasis).

The next section deals with the Emotional Coping Hierarchy of each participant in the three different groupings according to the themes.

4.5.1 Group 1

Group 1 consisted of participants 2, 3, 4, 6 and 8. These participants belonged to theme 1 of the results and made use of positive coping strategies and no negative coping strategies.

4.5.1.2 Participant 2

Figure 4.7 illustrates the Emotional Coping Hierarchy of participant 2.

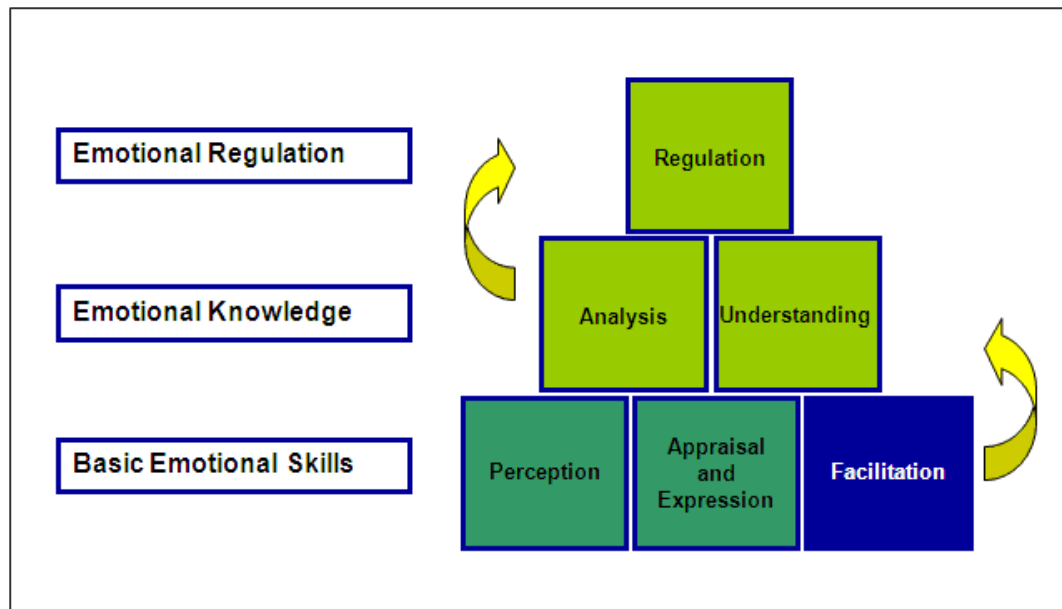


Figure 4.7 Emotional Coping Hierarchy: Participant 2

The first level of the Emotional Coping Hierarchy of participant 2 falls within the qualitative range of a *high average* and *strength* emotional intelligence score, with the second and third levels in the *average* score range. According to the model of Salovey and colleagues (1999) this participant should possess adequate emotional intelligence skills and therefore be able to cope adequately with the mastering of new educational technologies.

4.5.1.3 Participant 3

Figure 4.8 illustrates the Emotional Coping Hierarchy of participant 3.

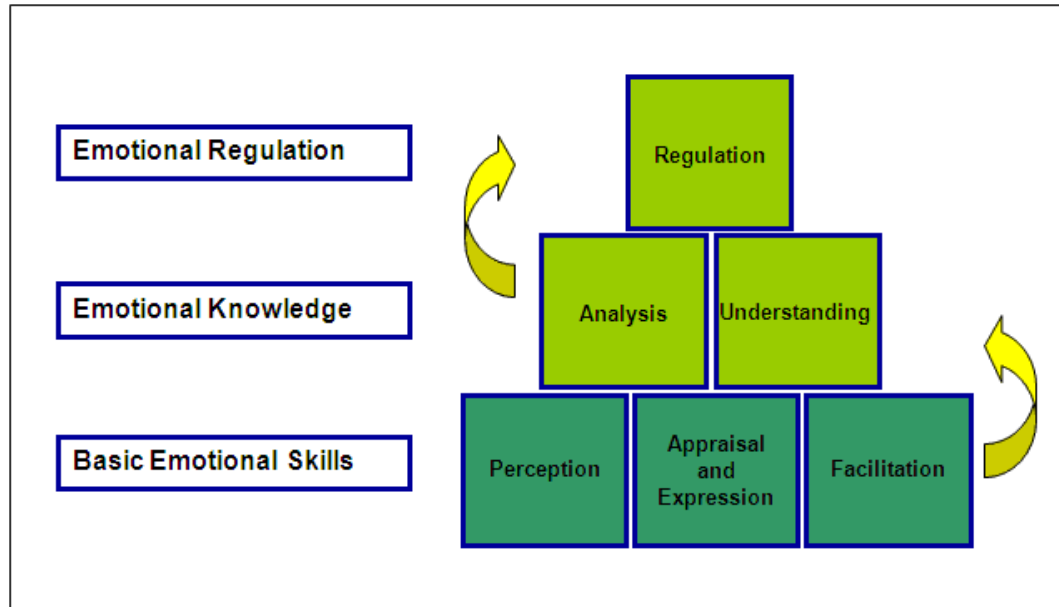


Figure 4.8 Emotional Coping Hierarchy: Participant 3

The first level of the Emotional Coping Hierarchy of participant 3 falls within the qualitative range of a *high average* emotional intelligence score, with the second and third levels in the *average* score range. According to the model of Salovey and colleagues (1999) participant 3 should have adequate emotional intelligence skills and therefore be able to cope satisfactorily with the mastering of new educational technologies.

4.5.1.4 Participant 4

Figure 4.9 illustrates the Emotional Intelligence Hierarchy of participant 4.

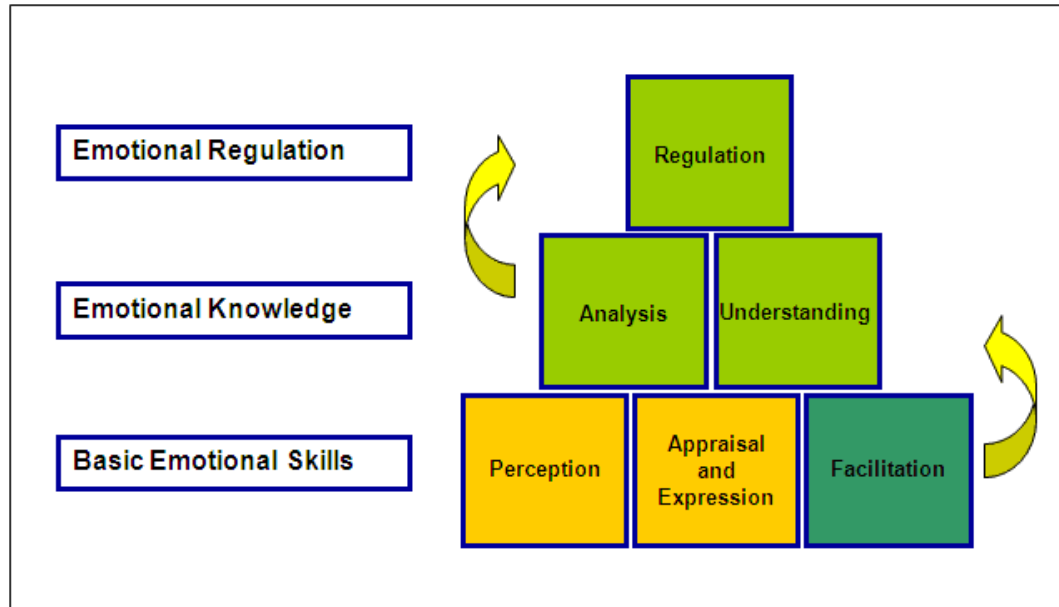


Figure 4.9 Emotional Coping Hierarchy: Participant 4

In the first level of the Emotional Coping Hierarchy of participant 4, Perception, Appraisal and Expression falls within the qualitative range of a *consider enhancement*, Facilitation falls within the range of *strength* emotional intelligence score, with the second and third levels in the *average* score range. According to the criteria set by Salovey and colleagues (1999) the first level of the Emotional Intelligence Hierarchy of this participant is not fully developed and thus, theoretically, this participant should have problems in coping adequately with the mastering of new educational technologies.

4.5.1.5 Participant 6

Figure 4.10 illustrates the Emotional Coping Hierarchy of participant 6.

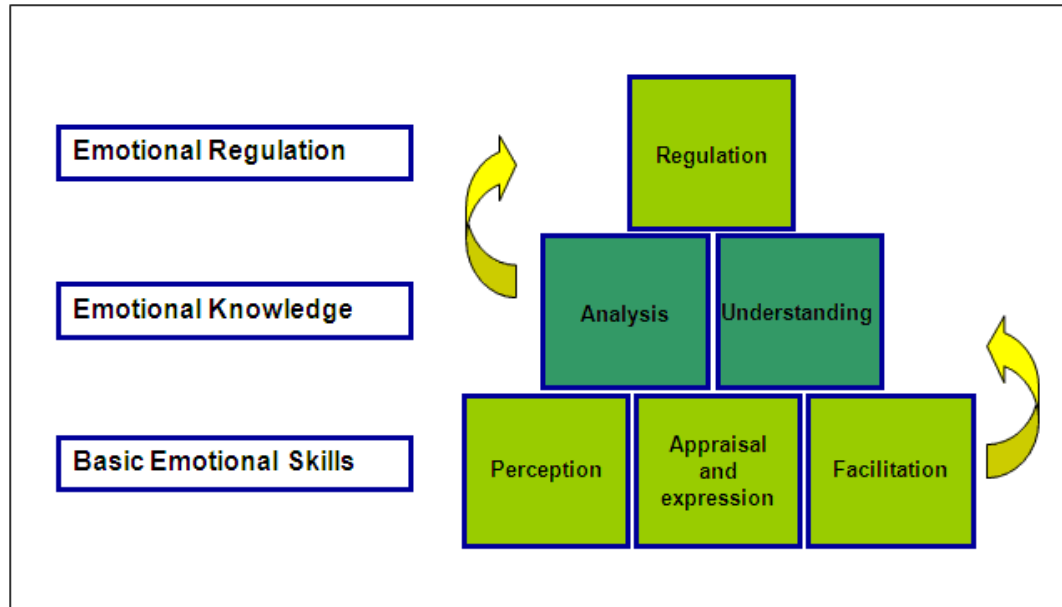


Figure 4.10 Emotional Coping Hierarchy: Participant 6

The first and third level of the Emotional Coping Hierarchy of participant 6 falls within the qualitative range of an *average* emotional intelligence score, with the second level in the *high average* score range. According to the model of Salovey and colleagues (1999) participant 6 should possess adequate emotional intelligence skills and therefore be able to cope satisfactorily with the mastering of new educational technologies.

4.5.1.6 Participant 8

Figure 4.11 illustrates the Emotional Coping Hierarchy of participant 8.

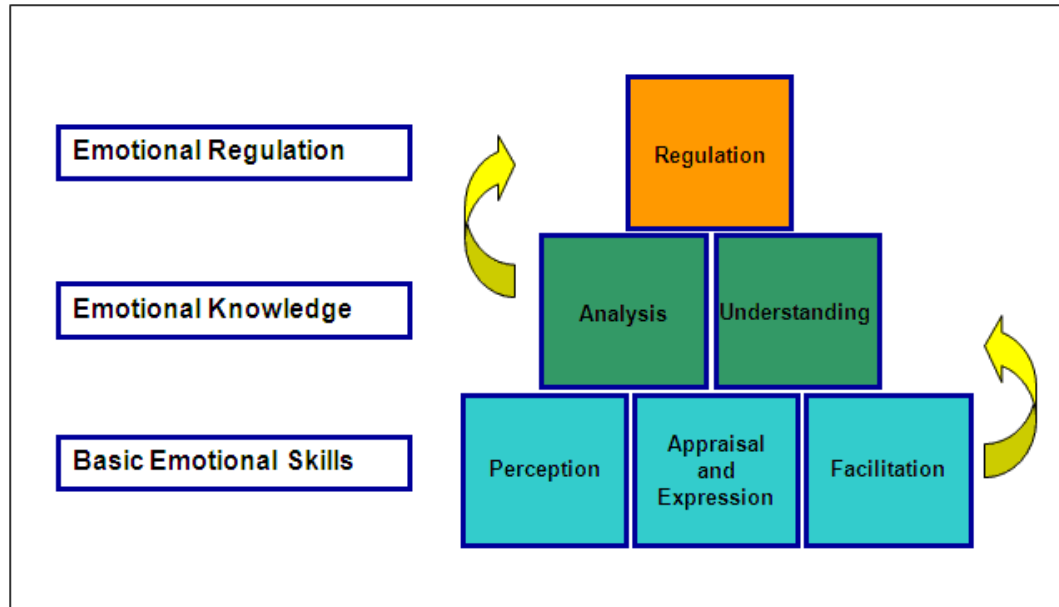


Figure 4.11 Emotional Coping Hierarchy: Participant 8

The first level of the Emotional Coping Hierarchy of participant 8 falls within the qualitative range of *effective functioning* emotional intelligence score, with the second level in the high average score range. The third level falls within the qualitative range of a *consider enhancement* emotional intelligence score. Although the first two levels fall within the higher qualitative EI ranges, theoretically participant 8 should experience problems coping with new educational technologies as, according to the model of Salovey and colleagues (1999), the third level of emotional regulation is not adequately developed.

The next section contains a discussion on the Emotional Intelligence Hierarchy of the participants in the second group.

4.5.2 Group 2

Group 2 consisted of participants 5 and 9. This group of participants made use of positive and negative coping strategies.

4.5.2.1 Participant 5

Figure 4.12 illustrates the Coping Hierarchy of participant 5.

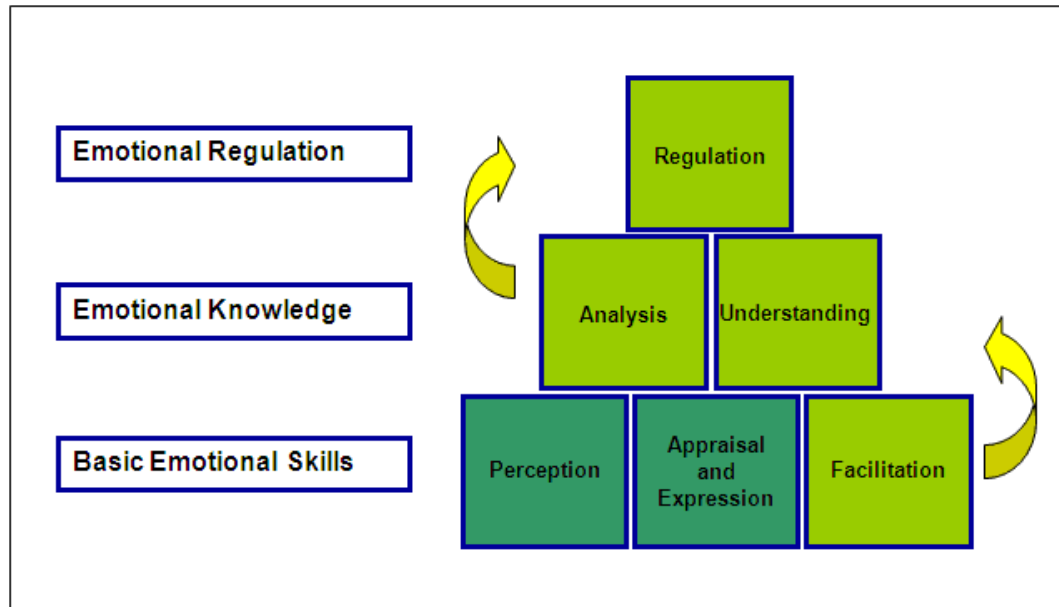


Figure 4.12 Emotional Coping Hierarchy: Participant 5

The first level of the Emotional Coping Hierarchy of participant 5 falls within the qualitative range of a *high average* and *average* emotional intelligence score, with the second and third levels in the *average* score range. According to the model of Salovey and colleagues (1999) participant 5 should possess adequate emotional intelligence skills and therefore be able to cope satisfactorily with the mastering of new educational technologies.

4.5.2.2 Participant 9

Figure 4.13 illustrates the Emotional Coping Hierarchy of participant 9.

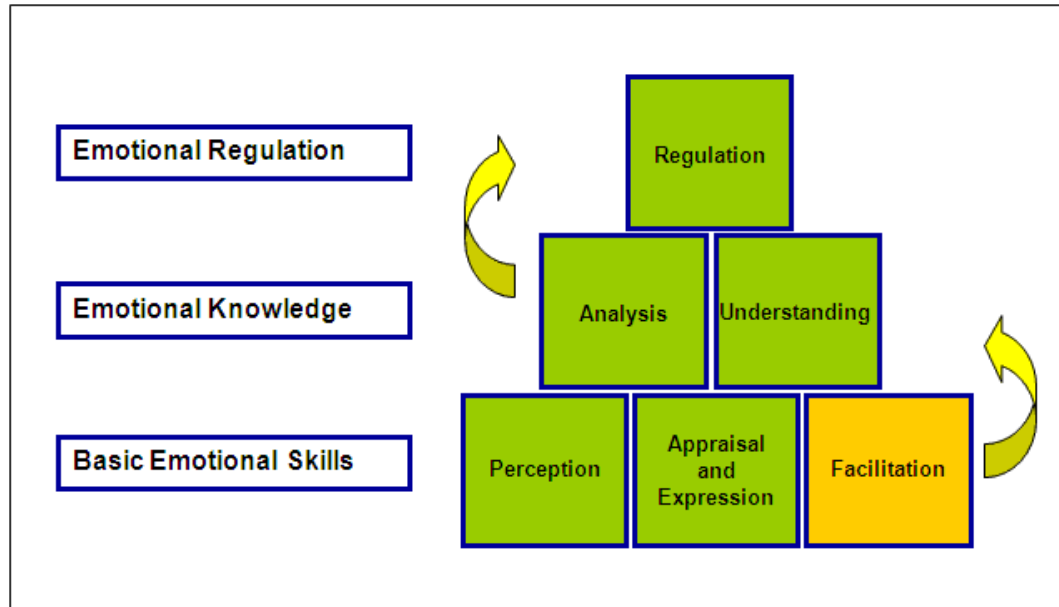


Figure 4.13 Emotional Coping Hierarchy: Participant 9

All the levels of the Emotional Coping Hierarchy of participant 5 fall within the qualitative range of the *average* emotional intelligence score, with the exception of Facilitation, which is on the *consider enhancement* level. According to the model of Salovey and colleagues (1999) the fact that all the levels are not adequately developed means the participant may have problems in coping adequately with the mastering of new educational technologies.

4.5.3 Group 3

Group 3 consisted of participants 1, 7 and 10. This group fell under theme 3 and used negative coping strategies and no positive coping strategies.

4.5.3.1 Participant 1

Figure 4.14 illustrates the Emotional Coping Hierarchy of participant 1.

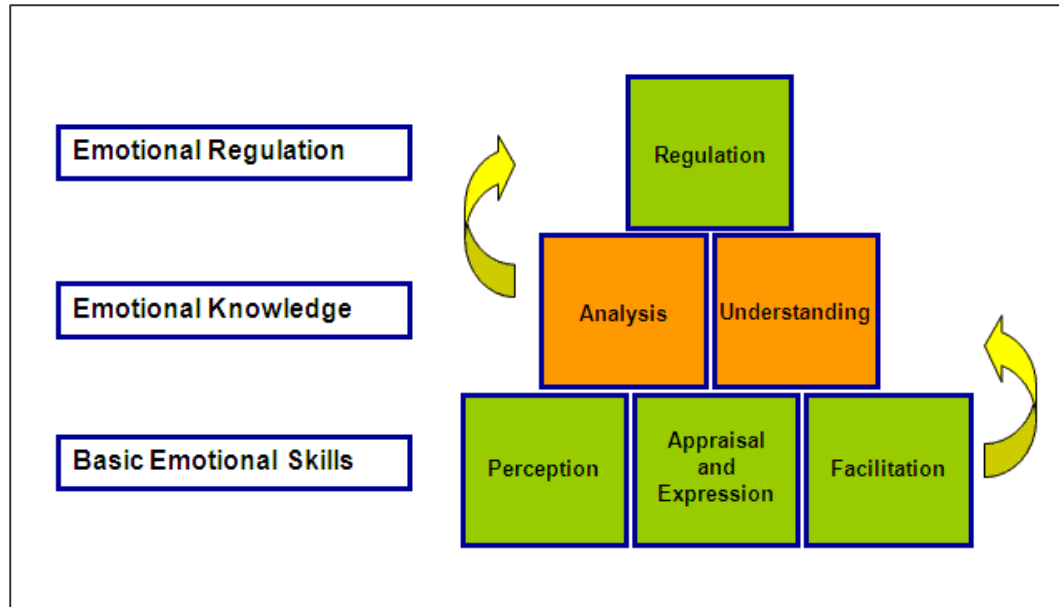


Figure 4.14 Emotional Coping Hierarchy: Participant 1

The first and third levels of the Emotional Coping Hierarchy of participant 1 fall within the qualitative range of an *average* emotional intelligence score, with the second level in the *consider enhancement* score range. As the second level of the Emotional Intelligence Hierarchy of this participant is, according to the criteria set by Salovey and colleagues (1999), not completely developed this participant will, theoretically, have problems in coping adequately with the mastering of new educational technologies.

4.5.3.2 Participant 7

Figure 4.15 illustrates the Emotional Coping Hierarchy of participant 7.

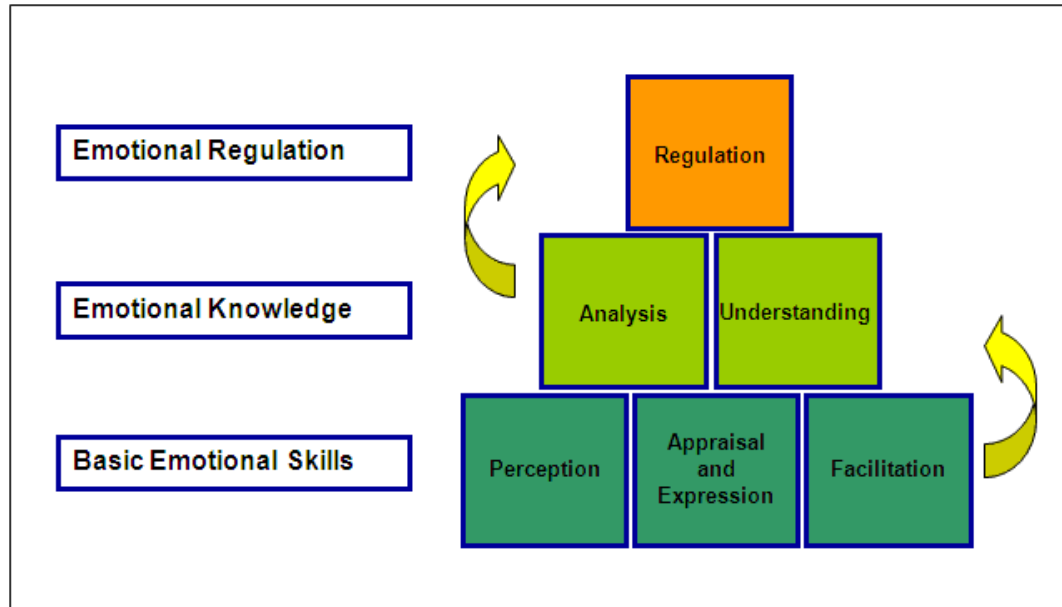


Figure 4.15 Emotional Coping Hierarchy: Participant 7

The first level of the Emotional Coping Hierarchy of participant 7 falls within the qualitative range of a *high average* emotional intelligence score, with the second level in the *average* score range. The third level, emotional regulation, falls in the *consider enhancement* range. As the third level of the Emotional Intelligence Hierarchy of this participant is, according to the criteria set by Salovey and colleagues (1999), not completely developed this participant will, theoretically, have problems in coping adequately with the mastering of new educational technologies.

4.5.3.3 Participant 10

Figure 4.16 illustrates the Emotional Coping Hierarchy of participant 10.

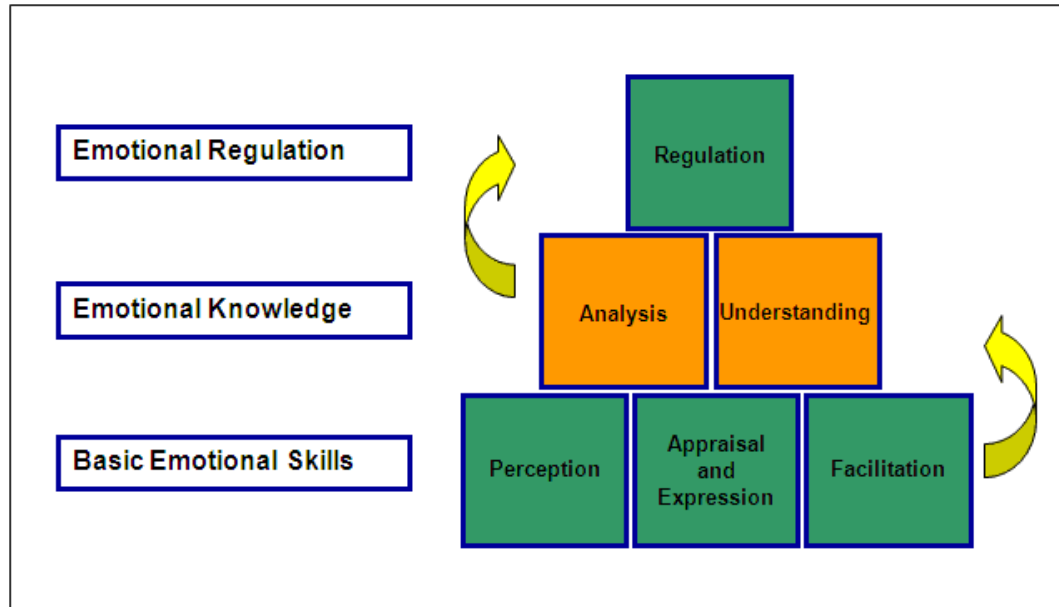


Figure 4.16 Emotional Coping Hierarchy: Participant 10

The first and third levels of the Emotional Coping Hierarchy of participant 10 fall within the qualitative range of a *high average* emotional intelligence score, with the second level in the *consider enhancement* score range. As the second level of the Emotional Intelligence Hierarchy of this participant is, according to the criteria set by Salovey and colleagues (1999), not completely developed, this participant will, theoretically, have problems in coping adequately with the mastering of new educational technologies.

The next chapter will explore linkages between coping strategies and EI scores in conjunction with the Emotional Coping Hierarchy according to Salovey *et al.*(1999).

4.5 Summary of chapter

This chapter presented the qualitative results of the document analysis, using Atlas.ti™, and the quantitative results from the emotional intelligence test, MSCEIT™. An attempt was made to gain an understanding of the emotions, reasoning and coping strategies of participants in the mastering of new educational technologies. The next chapter will present the trends regarding linkages between emotional intelligence and coping strategies.